US EPA RECORDS CENTER REGION 5

REVISED RCRA PART B PERMIT APPLICATION

E. I. du PONT de NEMOURS & CO.

AUTOMOTIVE PRODUCTS DEPARTMENT

TOLEDO, OHIO FACILITY

EPA ID. No. OHD 005 041 843
OHIO PERMIT NO. 03-48-0195

### INTRODUCTION

This document constitutes a revised Part A and a Part B application for a Resource Conservation and Recovery Act (RCRA) Hazardous Waste Management (HWM) storage facility permit at the E. I. du Pont de Nemours & Company's Finishes & Fabricated Products Department (F&FP) Toledo, Ohio paint plant. The plant notified the U.S. Environmental Protection Agency (USEPA), Region V of its HW activity under RCRA Section 3010 on August 11, 1980. A Part A application was submitted on November 18, 1980 to Region V as a storage (only) facility with both containers and tanks involved. The plant is operating under the Interim Status regulations (40 CFR Part 265). The plant subsequently received an Ohio EPA Hazardous Waste Facility Installation and Operating Permit under state regulations (No. 03-48-D195, December 4, 1981). A call for the Part B dated February 12, 1982 was received by the plant and is due August 18, 1982.

The format of this application follows the outline provided by Region V at their workshop held in Chicago on April 27, 1982.

#### A. PART A APPLICATION

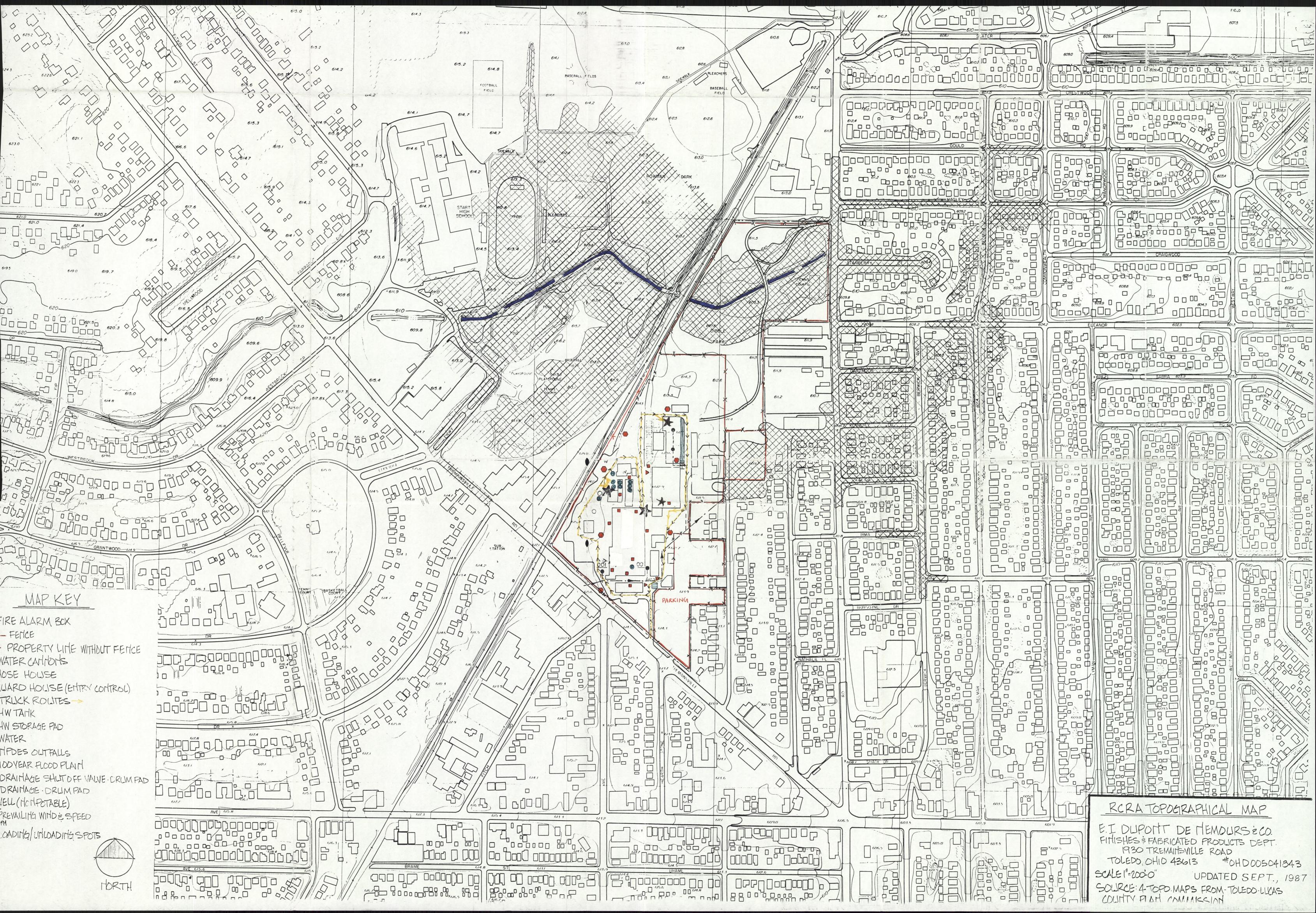
The following documents are attached:

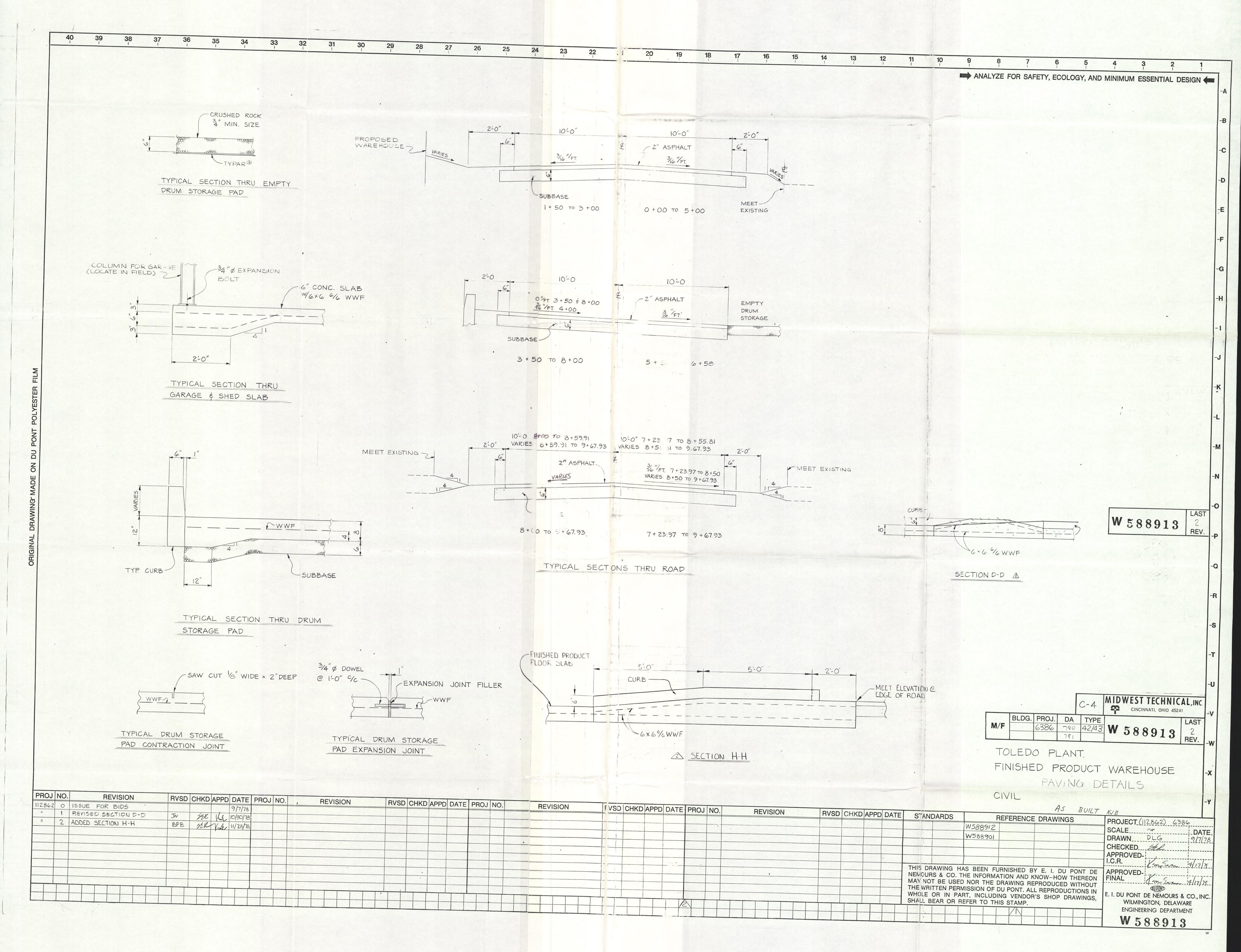
- Section 3010 Notification (August 11, 1980).
- Part A Application (November 18, 1980).
- Ohio EPA Facility Permit No. 03-48-D195 (December 4, 1981).
- Revised Part A Application (August 13, 1982).

The revised Part A has these changes from the original 1980 application:

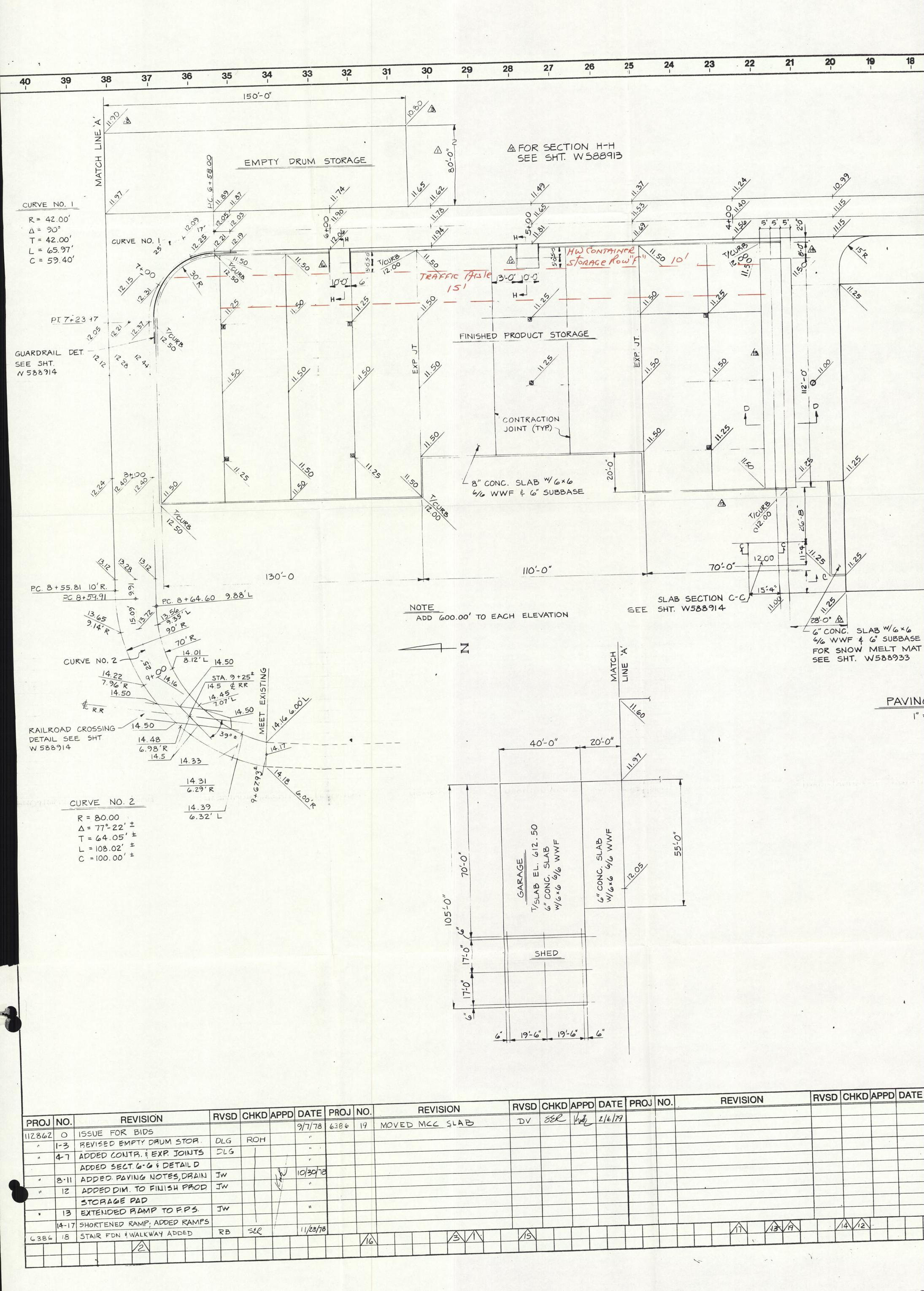
- 1. A more realistic maximum capacity for container storage (56,000 gallons versus 250,000) was determined from 1-1/2 years of operation under RCRA regulations. This change is also reflected in the Page 5 drawing and closure cost estimates.
- 2. A more realistic tank storage gallon estimate includes the proposed new tank (24,000 gallons versus 30,000 gallons).
- 3. One additional tank is proposed for dirty wash solvent than was indicated on the original Part A facility drawing (Section V). An existing tank, previously used for a raw material, is proposed for use to store dirty wash solvent received from our F&FP Department Flint, Michigan plant (see B-1) for recovery. This diked tank is already equipped for tank wagon unloading and will make more convenient, isolated storage location.

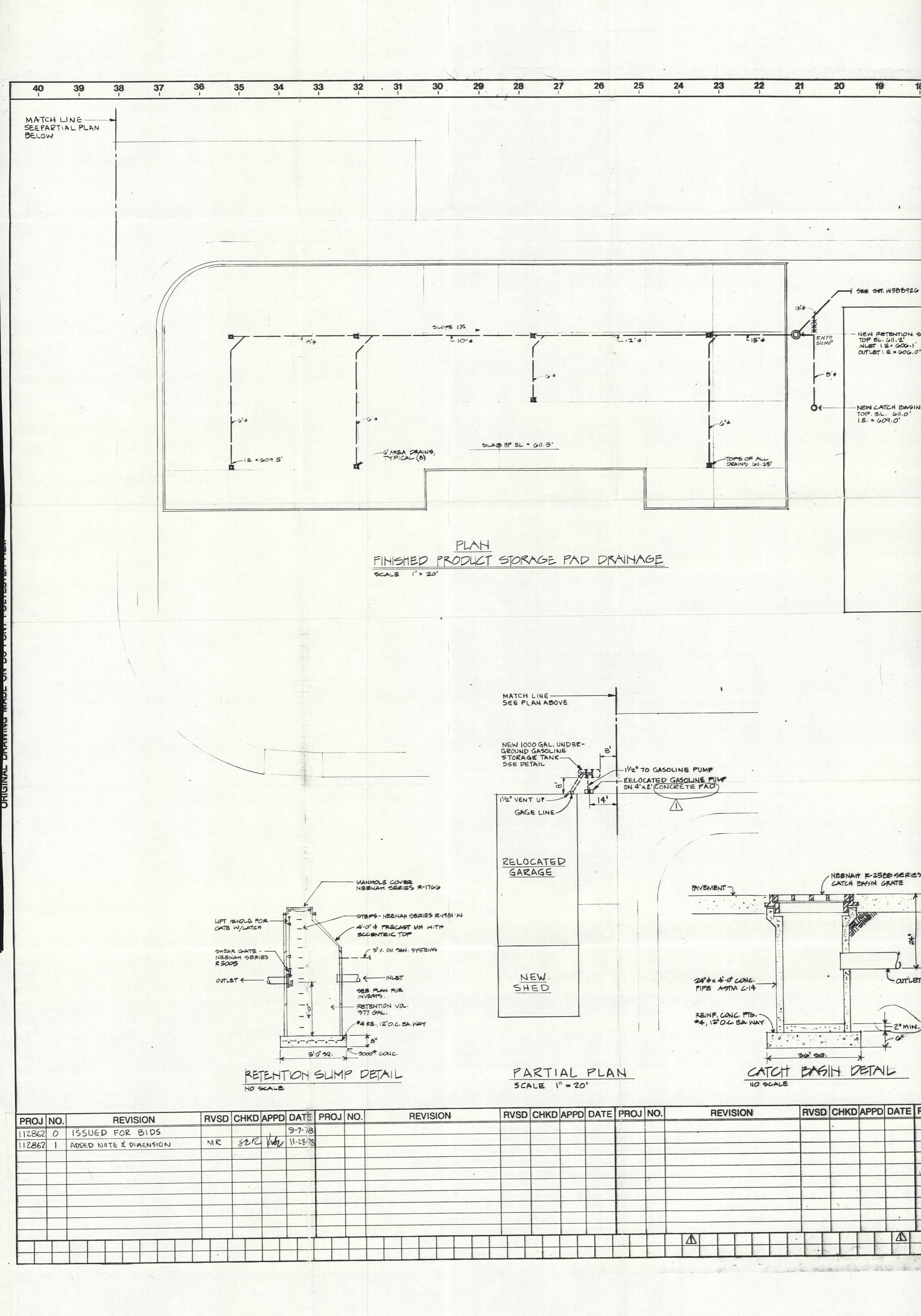
- 4. Elimination of waste streams listed under Section 261.32 at 45 FR 47832 (July 16, 1980)--K078 and K082--and subsequently suspended at 46 FR 4617 (January 16, 1981). The waste streams that had these designations have been included in streams with appropriate characteristics (e.g., D001, Ignitable).
- 5. An updated estimate of annual volume of the various waste streams under Section IV.
- 6. A new Vice-President--Finishes & Fabricated Products,
  J. P. Mc Andrews, replaces W. A. Bours III (retired) as signatory.
- 7. An updated 1:24,000 topographic map, revised Page 5 drawing and new photographs.





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RCRA PART B APPLICATION
E. I. DU PONT DE NEMOURS & COMPANY
F&FP DEPARTMENT PLANT--TOLEDO, OH

EPA ID NO. OHD005041843

REVISED RCRA PART A APPLICATION
(PART OF 8/16/82 PART B)
E. I. DU PONT DE NEMOURS & COMPANY
F&FP DEPARTMENT PLANT--TOLEDO, OH
EPA ID NO. OHD005041843

DRUM PAD



LOCATION B

TANK 1





LOCATION C
TANKS 2-8



LOCATION D
TANKS 9, 10, 15



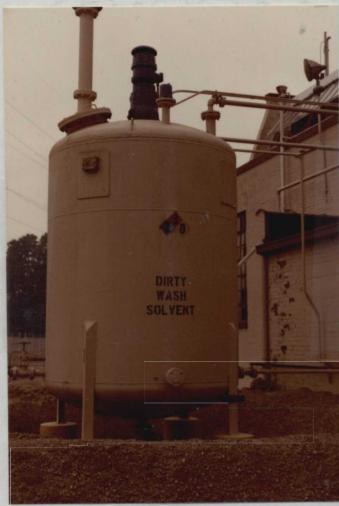
LOCATION E

TANKS 11 & 12

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REVISED RCRA PART A APPLICATION (PART OF 8/16/82 PART B)

E. I. DU PONT DE NEMOURS & COMPANY F&FP DEPARTMENT PLANT--TOLEDO, OH EPA ID NO. OHD005041843



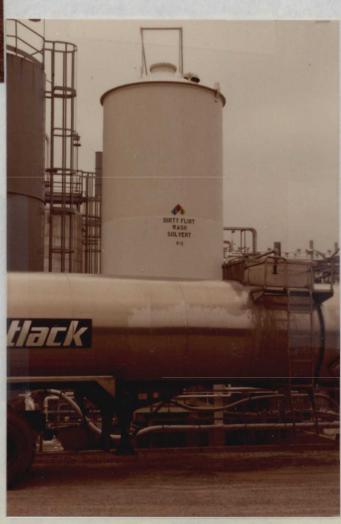
LOCATION F

TANK 13

LOCATION G

TANK 14

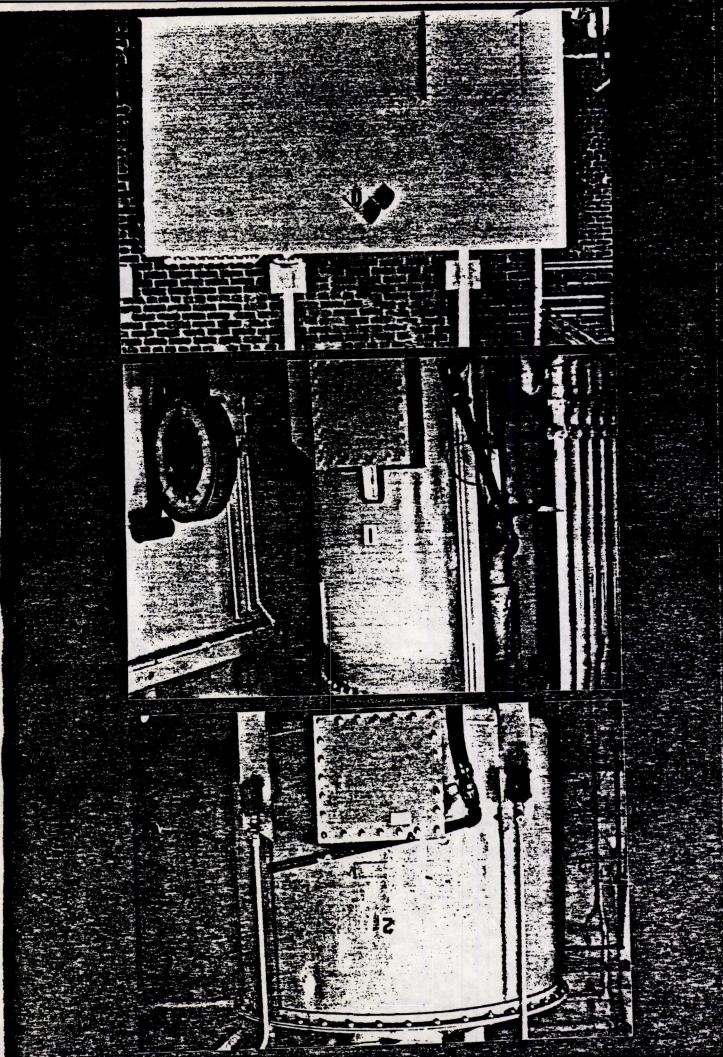
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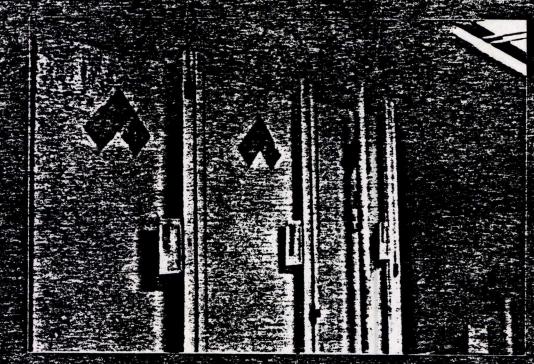












# azardous • waste • facility • approval • board

James R. Rhodes, Governor Wayne S. Nichols, Chairman



E. I. DuPont DeNemours & Co., Inc. 1930 Tremainsville Road Toledo, Ohio 43613

Re: Permit No. 03-48-0195

Attn: Jerome W. Shemechko

DEC 4 1981

#### Dear Permittee:

Transmitted herewith is a certified copy of your Hazardous Waste Facility Installation and Operation Permit (Permit) as such permit was entered into the Journal of the Board. The permit consists of the following:

- 1) The standardized permit form (Findings and Conclusions and Issuance).
- Terms and Conditions as approved by the Board (Special Terms and Conditions applicable to all permittees and Special Terms and Conditions for specific facilities).
- Portions of the approved Part A permit application indicating the approved hazardous waste processes and design capacities and those hazardous wastes, identified by U.S. EPA Hazardous Waste Number, to be managed at the facility.

Processes, design capacities, and/or specific hazardous wastes which are stricken through or crossed out on the Part A permit application are not included in the approved permit. Unless otherwise notified by certified mail and afforded the opportunity for an adjudication hearing before the Board, all such deletions have occurred with the authorization of the applicant or his representative.

You are encouraged to carefully read the permit in its entirety. Any questions or comments concerning its content should be addressed to:

Executive Director
Hazardous Waste Facility Approval Board
P.O. Box 1049
361 East Broad Street

Ph: (614)462-6981

I CERTIFY THIS COPY TO BE A TRUE AND ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE DHIO HAZARDOUS WASTE FACILITY APPROVAL BOARD

HAZARADOUS WASTE FACILITY APPROVAL BOARD

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**EPA 9003** 

DATE 12-18-87

YOU ARE HEREBY ADVISED THAT: All appeals of these matters are to the Court of Appeals of Franklin County, 369 South High St., Columbus, Ohio 43215, Attn: Deputy Clerk, and shall be pursuant to the provisions of Section 3734.05(C)(7) of the Revised Code.

Sincerely,

Piggy J. Vince

Peggy J. Vince Executive Director

PJV/ss .

Enclosure

CERTIFY THIS COPY TO BE A TRUE AND ACCURATE COPY OF THE OFFICIAL BUCCMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY APPROVAL BOARD

BY M

\_\_\_ DATE <u>/2-/6 - 81</u>

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#### STATE OF OHIO

#### HAZARDOUS WASTE FACILITY APPROVAL BOARD

In the Matter of:

E. I. DuPont DeNemours & Co., Inc. 1930 Tremainsville Road Toledo, Ohio 43613 ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY APPROYAL BOARD

Applicant/Permittee

The operator of the belowreferenced hazardous waste facility

E. I. DuPont DeNemours & Co., Inc. 1930 Tremainsville Road Toledo, Ohio 43613 HAZARADOUS WASTE FACILITY
APPROVAL SOARD

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**Facility** 

Pursuant to Section 3734.05(D) of the Revised Code, The Hazardous Waste Facility Approval Board (Board) makes the following Findings and Conclusions and issues a Hazardous Waste Facility Installation and Operation Permit (Permit)

#### FINDINGS AND CONCLUSIONS

- 1. The Applicant has submitted to the Board a completed permit application, stating the facility was in operation immediately prior to October 9, 1980, and has paid the required permit fee.
- 2. The Ohio Environmental Protection Agency (Agency) and/or the United States Environmental Protection Agency has inspected the facility and has prepared an Interim Status Standards Survey (survey).
- 3. All public comments timely received have been reviewed, evaluated and considered by the Board and the Agency for their relevancy and materiality.
- 4. The Agency has reviewed and considered the information on the permit application, the results of the survey, the public comments, and other pertinent material and has concluded that the facility was in substantial compliance, as determined by the Director of Environmental Protection, with applicable statutes and rules in effect immediately prior to October 9, 1980.

- 5. The Agency has informed the Applicant of the requirements of applicable hazardous waste rules of which it was not in compliance.
- The Agency has recommended to the Board that a permit be issued to the facility.
- 7. Review and consideration of the information on the permit application, the results of the survey, the public comments, recommendations and comments by the Agency, and other pertinent material regarding the Applicant and the facility is sufficient to determine whether the facility meets the requirements for permit issuance set forth in Section 3734.05(D) of the Revised Code.
- 8. The staff of the Board has reviewed and considered the information on the permit application, the results of the survey, the public comments, the recommendation and comments by the Agency, and other pertinent material regarding the Applicant and the facility and has recommended to the Board that a permit be issued.
- 9. Pursuant to Resolution No. 171-81, passed September 15, 1981, the Board found that the facility:
  - a. Was in operation immediately prior to October 9, 1980,
  - b. Was in substantial compliance, as determined by the Director of Environmental Protection, with applicable statutes and rules in effect immediately prior to October 9, 1980,
  - c. Submitted a completed permit application, and
  - d. Has demonstrated to the Board that its operation after October 9, 1980 will comply with applicable performance standards adopted by the Director of Environmental Protection pursuant to division (D) of Section 3734.12 of the Revised Code.
- 10. Pursuant to such Resolution, the Board resolved and approved that a permit be issued with such standard terms and conditions set forth in the document entitled "Terms and Conditions" attached to the Resolution and such special terms and conditions as were approved by the Board.
- 11. The terms and conditions referenced in Finding Number 10 above, are attached hereto and incorporated herein.
- 12. Resolution No. 21-81, passed on August 26, 1981 and entered into the Journal of the Board on September 1, 1981, authorizes the Coordinator of the Board to:

ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY APPROVAL BOARD

BY \_\_\_\_\_\_ DATE 15-10-81

HAZARADOUS WASTE FACILITY
APPROVAL BOARD

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- a. Authorize the staff of the Board to issue to the facilities the Hazardous Waste Facility Installation and Operation Permits approved for issuance by resolution of the Board, and
- b. Have signing authority indicating that such action has been approved by the Board.

NOW THEREFORE, A HAZARDOUS WASTE FACILITY INSTALLATION AND OPERATION PERMIT IS ISSUED TO THE Applicant for the facility, subject to the Terms and Conditions attached hereto and incorporated herein.

FOR THE BOARD, BY ORDER OF THE BOARD

Piggy J. Vince Dec 4, 1981

Madeline Samson/sec.

I CERTIFY THIS COPY TO BE A TRUE AND ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY APPROVAL BUARD

DATE 13-10-81

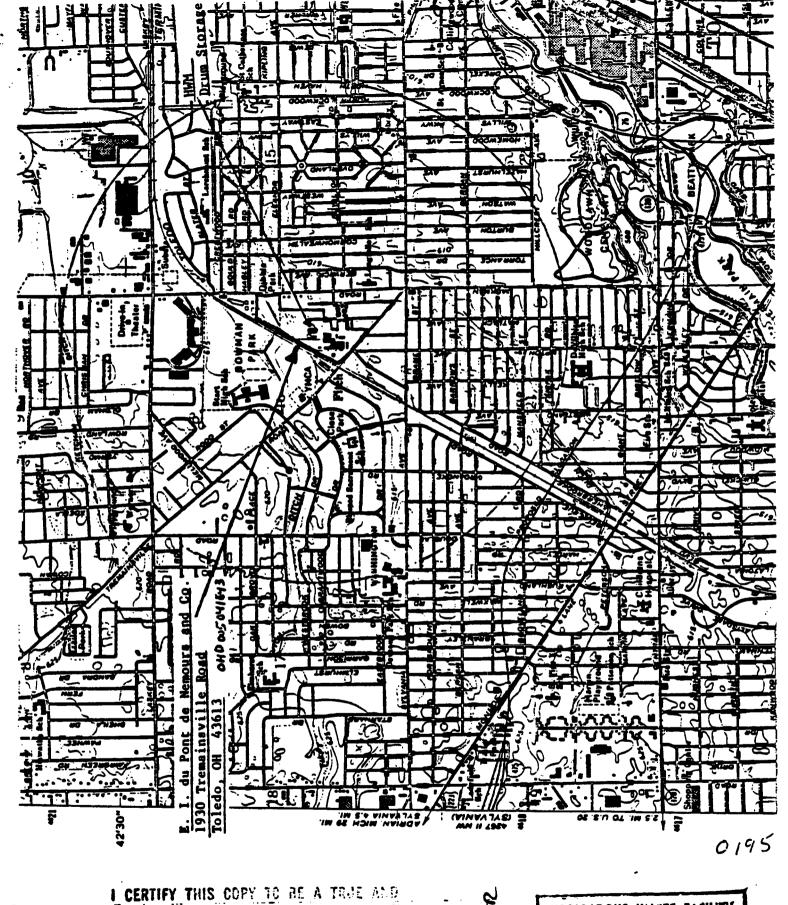
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BY \_\_\_\_\_\_\_ DATE 12-18-81

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# ADDITIONAL INFORMATION FORM 1 (EPA FORM 3510-1)

E. I. Du Pont de Nemours & Company, Inc. E.P.A. I.D. Number <u>OHDO050418</u> 1930 Tremainsville Road Toledo, Ohio 43613

Additional information is provided for Section:

X Existing Environmental Permits

City of Toledo, Ohio Air emission permits

Nos	0448010058P002
	0448010058P003
_	0448010058P004
-	04-122
_	0448010058P001
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BY <u>92</u> DATE 13-11-81

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I CERTIFY THIS COPY TO BE A TRUE AND ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY APPROVAL BOARD

M DATE 12-10-81

DESCRIPTION OF HAZARDOUS WASTES
FA HAZARDOUS WASTE NUMBER - Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle, if y indle hazardous westes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the character

STIMATED ANNUAL QUANTITY — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an ann is. For each characteristic or texts contaminent entered in column A estimate the total annual quantity of all the non-listed weste(s) that will be hand nich passes that characteristic or contaminent.

MIT OF MEASURE - For each quantity entered in column 8 enter the unit of measure code. Units of measure which must be used and the appropri -446

ENGLISH UNIT OF MEASURE CODE	METRIC UNIT OF MEASURE	CODE
POUNES	KILOGRAMS	R
Tana.	METRIC TOME	

I faultry records use any other unit of measure for quentity, the units of measure must be converted into one of the required units of measure taking in quest the appropriate density or specific gravity of the weste.

### ROCESSES

PROCESS CODES:

Per listed hazardous wester For each listed hazardous weste entered in column A select the cadelel from the list of process codes contained in Item to indicate how the weste will be stored, treated, and/or disposed of at the facility.

-listed heserdous wastes: For each characteristic or taxic contaminant entered in column A, select the code(s) from the list of process or contained in Item III to indicate all the processes that will be used to store, trust, and/or dispose of all the non-listed hazardous wester that pos that characteristic or toxic contemin

Metes: Four ppeaks are provided for entering process codes. If more are needed: (1) Enter the first three as described above: (2) Enter "000" in extreme right best of learn IV-0(1); and (3) Enter in the space provided on page 4, the line number and the additional costs(s).

. PROCESS DESCRIPTION: If a ease is not listed for a process that will be used, describe the process in the space provided on the form,

TE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hespidous westes that can be described s then one EPA Hazardous Waste Number shall be described on the form as folio

. Salest one of the EPA Hazardous Waste Numbers and enter it in equinit A. On the same line complete columns 8.C, and D by estimating the total an quentity of the wests and describing all the processes to be used to treat, store, and/or dispose of the wests.

In column A of the next line enter the other EPA Hezardous Waste Number that can be used to describe the wests. In column 0(2) on that line c

"Included with above" and make no other entries on that line.

L. Report step 2 for each other EPA Hazardous Waste Number that can be used to describe the hexardous w

MPLE FOR COMPLETING ITEM IV (shows in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 po-year of chrome shavings from leather tenning and finishing operation. In addition, the facility will treat and dispose of three non-listed wester. Two we corrowive only and there will be an estimated 200 pounds per year of each wester. The other wester is corrowive and ignitable and there will be an estimated. pounds per year of that wests. Treatment will be in an incinerator and disposal will be in a landfill.

T	A. EPA			C. UNIT OF MEA- SURE (onter		D. PROCESSES											
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Page 1 of 8

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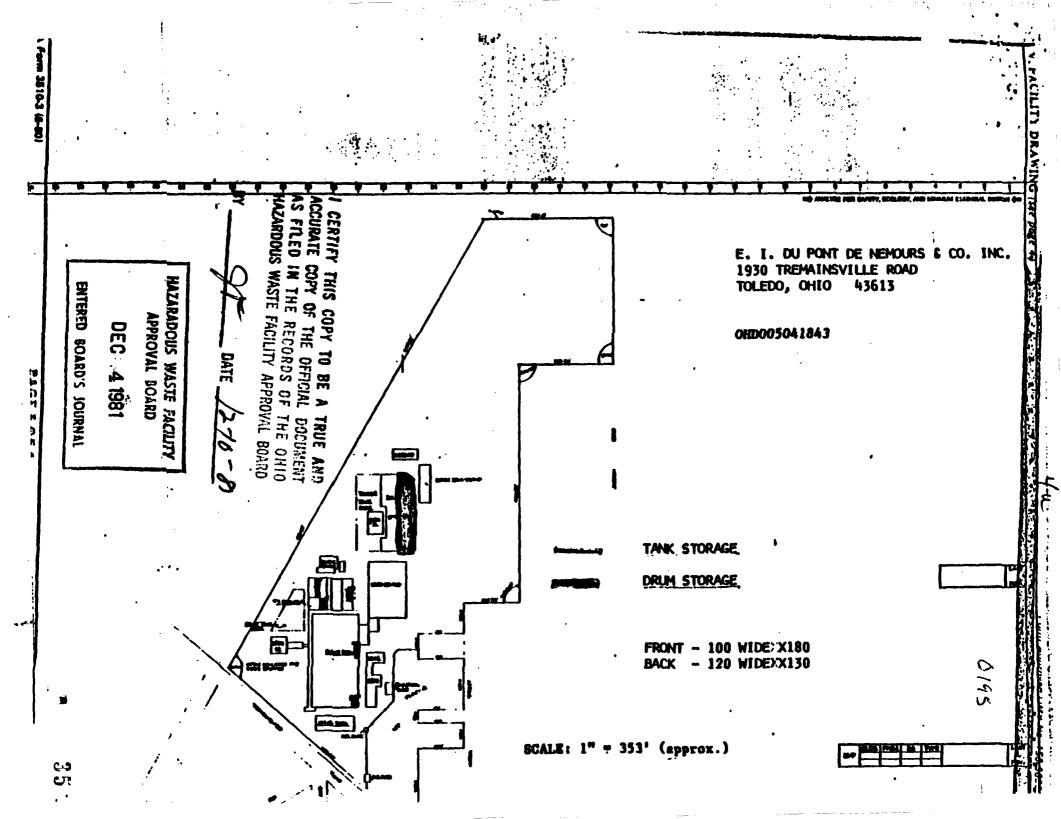
25, 27, 27,

Form Approved OME No. 158-580004 MOTE: Protocopy this page before completing if you have more than 26 westes to list. FOR OFFICIAL USE ONLY EPA I.B. NUMBER (enter from page 1) WOHDOD 5041843 Ÿ. DUP DUP IV. DESCRIPTION OF HAZARDOUS WASTES (continued) C. UNIT OF MEA-SURE (enter code) A. EPA HAZARD. WASTENO (onter code) D. PROCESSES 8. ESTIMATED ANNUAL QUANTITY OF WASTE 1. PROCESS CODES (enter) 2. PROCESS DESCRIPTION (If a code is not entered in D(1)) KIO17 3 1,000,000 1 S 0 1 2 al a 1,240,000 3 al al 5 Included with the above S 0 1 2 20,000 1 5 0 1 5 ol 4,000,000 6 a 0 7 7 Included with the above d 0 8 P 5 0 αí 2,500 0 60,000 Included with the above 11 12 PThis should Hermin Dunu on Sept 13 14 15 T CERTIFY THIS COPY IC BE A TRUE AND 16 ACCURATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO 17 HAZARDOUS WASTE FACILITY APPROVAL BOARD 18 19 20 HAZARADOUS WASTE FACILITY APPROVAL BOARD 21 DEC 4 1981 ENTERED BOARD'S JOURNAL 23 <sup>-</sup>4 25 26 EPA Form 3610-3 (6-80) CONTINUE ON BI

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LUSE THIS SPACE TO LIST ADDITIONAL PROCE	SS CODES FROM ITEM D(I) ON PAGE 3.	
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HAZARADOUS WASTE FACILITY	•	•
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d H D 0 0 5 0 4 11 8 4 3 6		
FACILITY DRAWING		
If entirting facilities must include in the space provided on page LPHOTOGRAPHS	e 5 a scale drawing of the facility (see instructions for	more detail).
M existing facilities must include photographs (serial	or ground—level) that clearly delineate all exist	ing structures; existing storage.
reatment and disposal areas; and sites of future storag		
IL FACILITY GEOGRAPHIC LOCATION		
LATITUDE (degrees, minutes, & seconds)	LONGITUDE	legres, minutes, & seconds)
4 1 4 1 0 4 1	[0]8].	3 3 3 5 10 2 11
III. FACILITY OWNER		
A. If the facility owner is also the facility operator as lists ship to Section IX below.	rd in Section VIII on Form 1, "General Information",	, place an "X" in the bex to the left an
S. If the facility owner is not the facility operator as lissa	of in Passion VIII on Rosen C. complete the deligning	. Hennes
1. NAME OF FACILIT	A-2 FEEVE DANEN	2. PHONE NO. (one code i
WE TRANSPOOR		
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ibmitted information is true, accurate, and complete. Including the possibility of fine and imprisonment.	I am awere that there are significant penalties (	for submitting false information,
	MERATURE	C. DATE SIGNED
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OPERATOR CERTIFICATION		the state of the s
cartify-under penalty of law that I have personally exception of those indi-	emined and am familiar with the information a	ubmitted in this and all attached when information I haling the short of
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4 Ferm 3810-2 (6-80)		CONTINUE ON
· 34	PAGE 4 OF 5	

4. 6. 100



## TERMS AND CONDITIONS (General)

- I. Only those hazardous wastes as identified by the U.S. EPA Hazardous Waste Number(s) set forth in the approved permit application, attached hereto, may be managed at the facility and only pursuant to the specified processes and design capacities indicated and set forth in the approved permit application.
- 2. The Permittee and the facility shall comply with all applicable performance standards adopted by the Director of Environmental Protection pursuant to Division (D) of Section 3734.12 of the Revised Code.
- 3. The Permittee and the facility shall comply with all applicable requirements of Chapter 3734 of the Revised Code, the Ohio Hazardous Waste Rules, and the federal statutes and regulations concerning hazardous waste.
- 4. This permit shall expire three years after its date of issuance. The date of issuance is the date the resolution to issue the permit was passed by the Board.
- 5. This permit, in accordance with the procedures of the Board, may be modified, revoked, or alternatively revoked and reissued, to comply with applicable provisions of Chapter 3734 of the Revised Code or the Ohio Hazardous Waste Rules.
- 6. The annual permit fer, payable to the Treasurer of State, shall be submitted to and received by the Board on or before the anniversaries of the date of issuance, during the term of the permit.
- 7. Unless otherwise specifically provided, all studies, reports, data, plans and other information required to be submitted by this permit shall be transmitted to:

Hazardous Waste Facility Approval Board P.O. Box 1049 361 East Broad Street Columbus, Ohio 43216

The permit number shall be indicated on the transmittal letter.

TERMS AND CONDITIONS (Special)

TIFY THIS COPY TO BE A TRUE AND ACCUMATE COPY OF THE OFFICIAL DOCUMENT AS FILED IN THE RECORDS OF THE OHIO HAZARDOUS WASTE FACILITY AFPROVAL WOARD

NOT APPLICABLE

HAZARADOUS WASTE FACILITY
APPROVAL BOARD

DEC 4 1981

ENTERED BOARD'S JOURNAL

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CONTINUED FROM THE FRONT VII. SIC CODES (4-digit, in order of priority)					
A. FIRST				B. SECOND	
7 2.8.5.1 Paint And Allied	Products	7	(specify) N/		
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III. OPERATOR INFORMATION					
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E.I. Du Pont	de Nemo	urs & (	Company		Owner?
C. STATUS OF OPERATOR (Enter the	appropriate letter into 1	he answer box: if "Ot	her" specify i	D. PHONE (e.	rea code & no.)
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F. CITY OR 1	OWN	G.57	ATE H. ZIP CODE	IX. INDIAN LAND	
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EXISTING ENVIRONMENTAL PERMITS		·			
A. MPDES (Discharges to Surface Water)  F. 2. 1. 6. * B.X.	D. PSD (Air E	missions from Propos  N / A	ed Sources)		
9. USC (Underground Injection of Fluids)	20 19 19 17 18	OTHER (specify)	30		
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G. RCRA (Hazardous Wastes)	[ E] Y [ ]   ]	OTHER (specify)			
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I. MAP	30 18 16 17 18	•	30		
Aftern to this application a topographic file outline of the facility, the location of the facility, the location of the facilities, the facilities, the facilities of the fac	of each of its existing and each well where tions for precise requi	and proposed intended in the contract of the c	ake and discharge s	structures, each of its	hazardous waste
Production of Paints, Re	sins, and Assoc	ciated Surfac	e Coating Mat	terials.	
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CERTIFICATION (see Instructions)					
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John P. Mc Andrews		SIGNATURE	4	1	ATE SIGNED
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A Form 3510-1 (6-90) REVERSE					1

REVERSE . 38

# ADDITIONAL INFORMATION FORM 1 (EPA FORM 3510-1)

E. I. du Pont de Nemours & Company, Inc. E.P.A. I.D. Number <u>OHD005041843</u> 1930 Tremainsville Road Toledo, Ohio 43613

Additional information is provided for Section:

X Existing Environmental Permits

City of Toledo, Ohio Air Emission permits

Nos. 044810058P001 044810058P002 044810058P003 044810058P004 044810058P005 044810058P006 044810058P007 044810058R001

Revised 8/10/82

#### ection B. FACILITY DESCRIPTION

#### B-1. General Description: OAC 3745-50-44(A)(1)

This HWM facility is for storage AND PRETREATMENT of RCRA HW
AND PROCESS WASTEWATER generated incident to manufacturing paint by
Du Pont's [Finishes & Fabricated] Automotive Products [(F&FP)] (AP)
Department only. [No] Regulated treatment or disposal activities
are carried out at this site. THIS ACTIVITY INVOLVES PROCESS
WASTE WATER PRETREATMENT. [Most] ALL of the HW stored in the
facility [will\_be] IS generated on site for ultimate disposal by
contract off-site. Some of the spent solvent (F003, F005, D001,
D018, D035) wastes will be recovered on-site as we have done for 25
years. Other spent solvent wastes (dirty wash solvent) with no
pigmentation (heavy metals) are burned in our industrial steam
wilers for fuel value (about 16,000 BTU per pound compared to
about 19,000 for fuel oil). This fuel value recovery has saved
about 33 billion BTU/year since 1978.

[The off-site waste received is ONLY from other F&FP Department sites whose RCRA programs are identical with Toledo's (e.g., the same waste characterization procedure for adequate handling and storage). Material is manifested from those sites in accordance with appropriate 40 CFR Part 262, 263, and 265 and state regulations. The sites which send or will send HW-are:

e-<u>Flint</u> MI <u>Plant</u> (MID 005512066); dirty wash-solventrecovery; will be sent in bulk.

There are no hazardous waste received from off-site at this DuPont location.

HW is stored on one container pad and in [6] 4 tank locations.

These tanks contain [only] dirty wash solvent destined for recovery, USED SOLVENTS FROM THE POLYMER AREA DESTINED FOR CONSUMPTION AS FUEL, AND SOLVENT RECOVERY STILL BOTTOMS DESTINED FOR OFF-SITE FUEL SYSTEM BLENDING. The concrete pad also contains finished product in portable tanks and drums.

# HAZARDOUS WASTE MANAGEMENT ACTIVITY LOCATIONS (All Are Storage Only)

	· ·				
Location Letter	Description*	Location			
Α	Container Pad	Drum & PORT TANK Storage Pad			
В	1 Collection Tank, NEW	Dulux Building			
· <del>[C</del>	2-Multiple-compartment	G Aisleway,			
	[Collection-Tanks	—Resin-Area]			
	3_Storage_Tanks	Lye Vat Room,			
		Building-5]			
<del>[E</del>	-2-Feed-Tanks	Solvent Recovery			
		Building-6]			
[F	1-Feed-Tank	West-of-Boiler			
		House, Bldg.			
c <del>[c]</del>	1 Storage Tank	West Tank Farm			
D [ <del>11]</del>	1 BOILER FUEL STORAGE/FEED TANK	WEST TANK FARM			
E <del>[1]</del>	1 COLLECTION/STORAGE FOR STILL BOTTOMS	WEST TANK FARM			

\* [All] TWO (2) OF THE tanks contain dirty wash solvent destined for recovery, ONE (1) OF THE TANKS IS FOR SOLVENT RECOVERY STILL BOTTOMS, AND THE LAST TANK IS FOR USED SOLVENT/BOILER FUEL COLLECTION AND STORAGE.

All drums are on pallets and any portable tanks in use have their own legs. The fixed tanks are all carbon steel and not affected by contact with organic solvent. Likewise, the steel drums or portable tanks ([magnesium] STAINLESS STEEL or aluminum) are not corroded or decayed by the paint wastes.

The [7] 5 HWM activity locations are within the fenced plant site where most of the raw materials, intermediates and finished products exhibit the same principle hazard characteristics as almost all the waste streams -ignitability. Du Pont has operated several paint plants with this prevalent hazard since before 1920. The fire prevention and emergency preparedness programs at these sites have successfully prevented any major fire and quickly contained the few small ones that occurred over 60+ years (nearly 50 at this site). Much of the planning, training, prevention activities and general emergency response awareness described in Sections F, G, and H of this application have been in effect for decades.

The plant primary processes fall under SIC 2851, Paint and Allied Products. Paint formulating generally is a simple, batch process mixing three primary ingredients:

- o <u>Pigments</u> organic and inorganic materials that give opacity, color and durability to the final paint film.
- o <u>Resins</u> Organic polymers that form the film, hold the pigment in place, and give adhesion to the substrate.
- Solvents Usually an organic compound (can be water for some products), normally non-halogenated, designed to suspend the resin and pigment prior to application, make application easy and to evaporate after application. Other ingredients may be added to facilitate flow-out, drying, film flexibility, etc.

Pigments used are received normally as a coarse dust which must be ground to finer particles and mixed into resin(s). Then solvents and other ingredients are mixed in and color, viscosity, gallon weight and other properties are adjusted. The finished product is then packaged in any of a large array of packages for shipment (FRFP) AP Department uses 1/2 pints to tank wagons).

Several thousand active, different formulations are made from time to time at the plant. These vary in color and/or resin types. Hence, considerable effort is expended on cleaning between batches—usually with a suitable wash solvent—or grinders, mixers and filling equipment. The solvent is a valuable material that can not economically be discarded. Hence, the spent solvent is distilled for reuse as wash solvent. The still bottoms are a listed HW (F003,[and] F005, D001, D018, D035 due to solvent mixtures used). [Dust-collectors] USE OF DIFFERENT PIGMENTS [generate] RESULTS IN hazardous wasteS [stream] due to THE content of Lead and Chromate compounds which are readily soluble in the EP Toxicity test.

The plant produces many of its own resins in a series of reaction kettles. These normally require heating raw materials to form the polymers. Washing of resin equipment, tanks, filters and lines between batches also generates spent solvent. Since solvent recovery of pigmented production washes usually produces sufficient wash solvent for reuse, reins washes are normally designed for their next most economical use—fuel value recovery. These spent solvents are classified F003,[and] F005, D001, D018, D035.

The HW-received from the other F&FP-Department-sites is only

#### OHD 005 041 843 / 03-48-0195 Revised 11-19-1987; 06-28-1991

dirty wash solvent from cleaning-resin and/or-paint makingequipment.—All-other-HW's at those sites are sent off-site tocontract-disposal under-RCRA-and-state-regulations]

#### OHD 005 041 843 / 03-48-0195 Revised 11-19-1987; 06-28-1991

#### FORM 1 (EPA FORM 3510-1)

E. I. du Pont de Nemours & Company, Inc. E.P.A. I.D. Number

OHD005041843 1930 Tremainsville Road Toledo, Ohio 43613

Additional information is provided for Section:

X Existing Environmental Permits

City of Toledo, Ohio Air Emission permits

Nos. <u>044810058P001</u>

044810058P002

044810058P003

044810058P004

044810058P005

044810058P006

044810058P007

044810058R001

STATE OF OHIO, WASTE WATER PRETREATMENT PERMIT

NO. 03-5716

Revised 08/10/1982 Revised 06/28/1991 OHD 005 041 843 / 03-48-0195 Revised 11-19-1987; <del>06-28-1991</del> **07-08-9** 

#### B-2. General Requirements: OAC 3745-50-44(A)(19)

#### B-2a. Topographic Map

Immediately following this [introductory] Section B is a foldout topographical map (1"=200') showing the plant site and the
immediate neighborhood. Because of the myriad of detail to be
included on the map, many of the items are shown in color (e.g.,
red dots for fire hydrants, deluge guns, hose boxes, etc. around
the site). Many fire control items—such as sprinklers in
buildings—are not shown in detail but are listed in Section F.
The Flood Plain Zone information came from the maps in Section B-3b
obtained from the city of Toledo.

Both the 1"=200' map and the map (1"=2000') in Section A show the surrounding land uses to be primarily residential and school, with some light commerce and industry, railroad and park land. The 1"=200' map was prepared from sectional maps obtained from the City of Toledo, Division of Inspection. The 1"=2000' map came from the U.S. Geological Survey.

[Detailed meteorological data for 1981 (in lieu of an unavailable wind rose) is attached showing the 1981 prodominate wind direction in Toledo to be West at 8.9 miles per hour. This was obtained from Rick Useilowski, Environmental Services Agency, City of Toledo.] THE WIND ROSE AND OTHER EXPLANATORY INFORMATION, AS SUPPLIED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION IS ENCLOSED AS ATTACHMENTS B-2a-4 THROUGH -12.

In addition, 2 plant drawings are included which show more

details of the site fire protection system and Hazardous Waste Management activity locations.

#### B-3. Location Information

#### B-3a. Seismic Standard

Section 264.18(a) is not applicable to this facility. No Ohio counties are listed in Appendix VI of Part 264--see 46 FR 2873 (January 12, 1981).

#### B-3b. 100-Year Flood Plains: OAC 3745-50-44(A)(11)(c)

Section 264.18(b) is not applicable to this HW storage facility. Information was received from Mr. John Marlais, Division of Inspection, City of Toledo (see documentation and maps attached). This clearly shows the HW locations on the plant site to be in Zone C or above the 500-year flood plain. Since all the waste is either in non-leaking DOT containers at least 5" off the paved surface on pallets in tanks the bottoms of which are at least 4-1/2 feet above the ground level, no environmental impact is expected from the minimal possible flooding of Zone C.

#### B-4. Traffic Information: OAC 3745-50-44(A)(10)

The traffic associated with the activity at the HWM facility on this site is a very small part of the total vehicular traffic in and around this urban plant. The normal route through the urban area to the highway (I-475) taken by the trucks that haul waste [to-and] from the plant is highlighted in yellow on the attached Toledo

map. Stop lights are indicated by red dots. Left hand turns are indicated by red directional arrows in highlighted areas. Traffic types involved in [three] TWO (2) waste categories are:

- [o Off-site Spent Solvent from other F&FP-sites—presently estimated to be:
  - b. Flint: 70 tank wagons (5,000-gallons-each) per-year]
  - o <u>On-site Spent AND USED Solvents</u> AND THE SOLVENT RECOVERY
    STILL BOTTOMS [is] ARE completely in pipes and tanks--no
    traffic
- o On-site Drummed HW (moved by plant fork trucks from buildings where generated to the storage pad prior to shipment off-site for contract disposal: About 800 drums and 25 portable tank or 2,025 fork truck trips per year.

In addition, HW is shipped off-site in drums ([100] 20 truckloads per year) and [12] 45 tank wagons ([2,500] 4,000 gallons each) of waste pumped from drums for bulk transport.

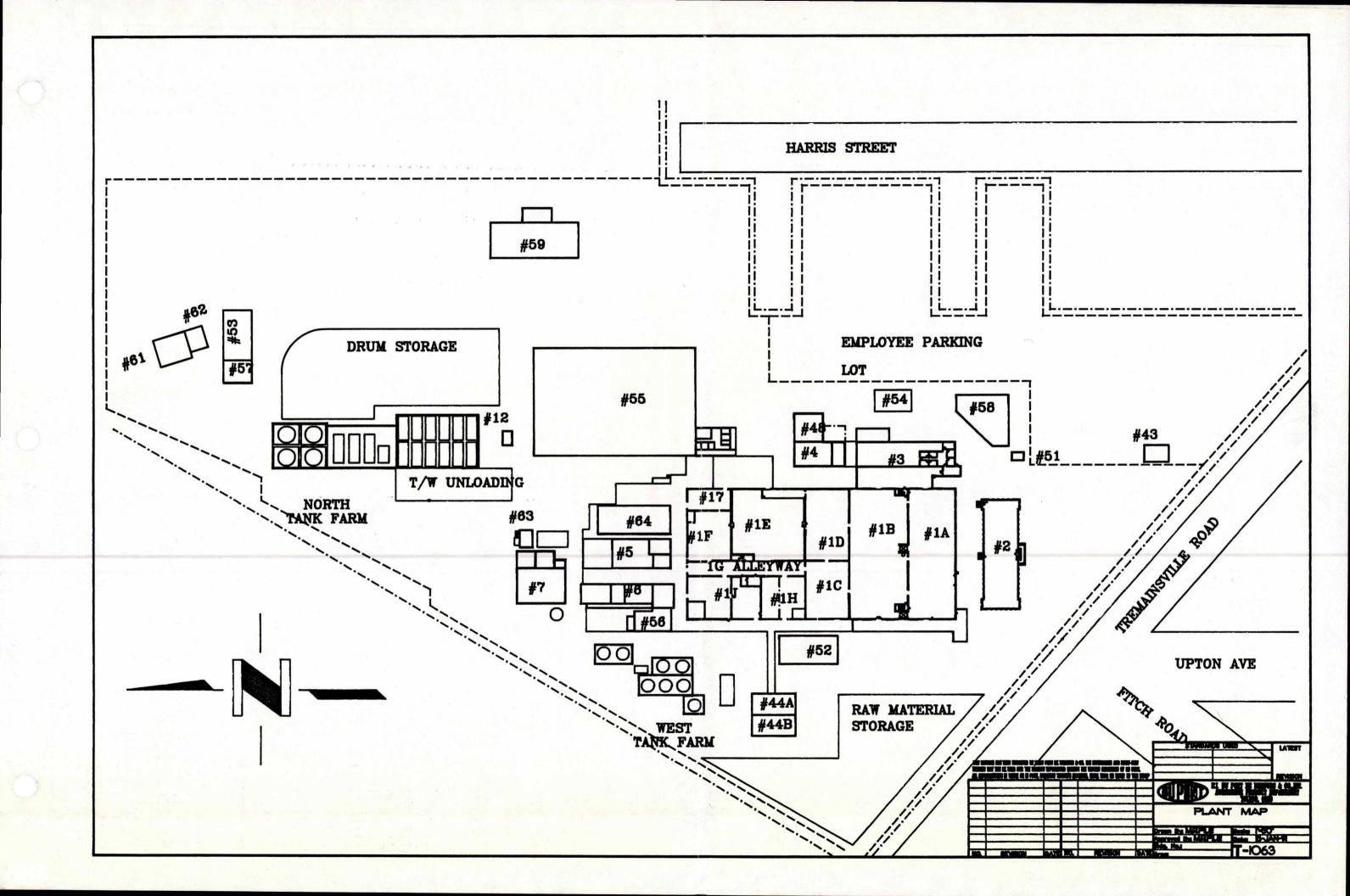
Reference should be made to the 1:24,000 map in the revised Part A application (as well as the 1" = 200' map in Section B-1) for truck routing. Although not always true, most out-of-town traffic would come to the plant from Interstate 475 via Jackman to Tremainsville or Phillips to Sylvania to Tremainsville. These are busy city streets with normal traffic light controls by the city. There is room for 4 tractor-trailer units inside the plant gate off Tremainsville Road (truck scale is also there).

The entire plant road surface is paved with concrete or black top to support the full trucks (75,000 pounds) that regularly deliver raw materials and take our finished product and waste shipments. The specifications used for contracting paving work are:

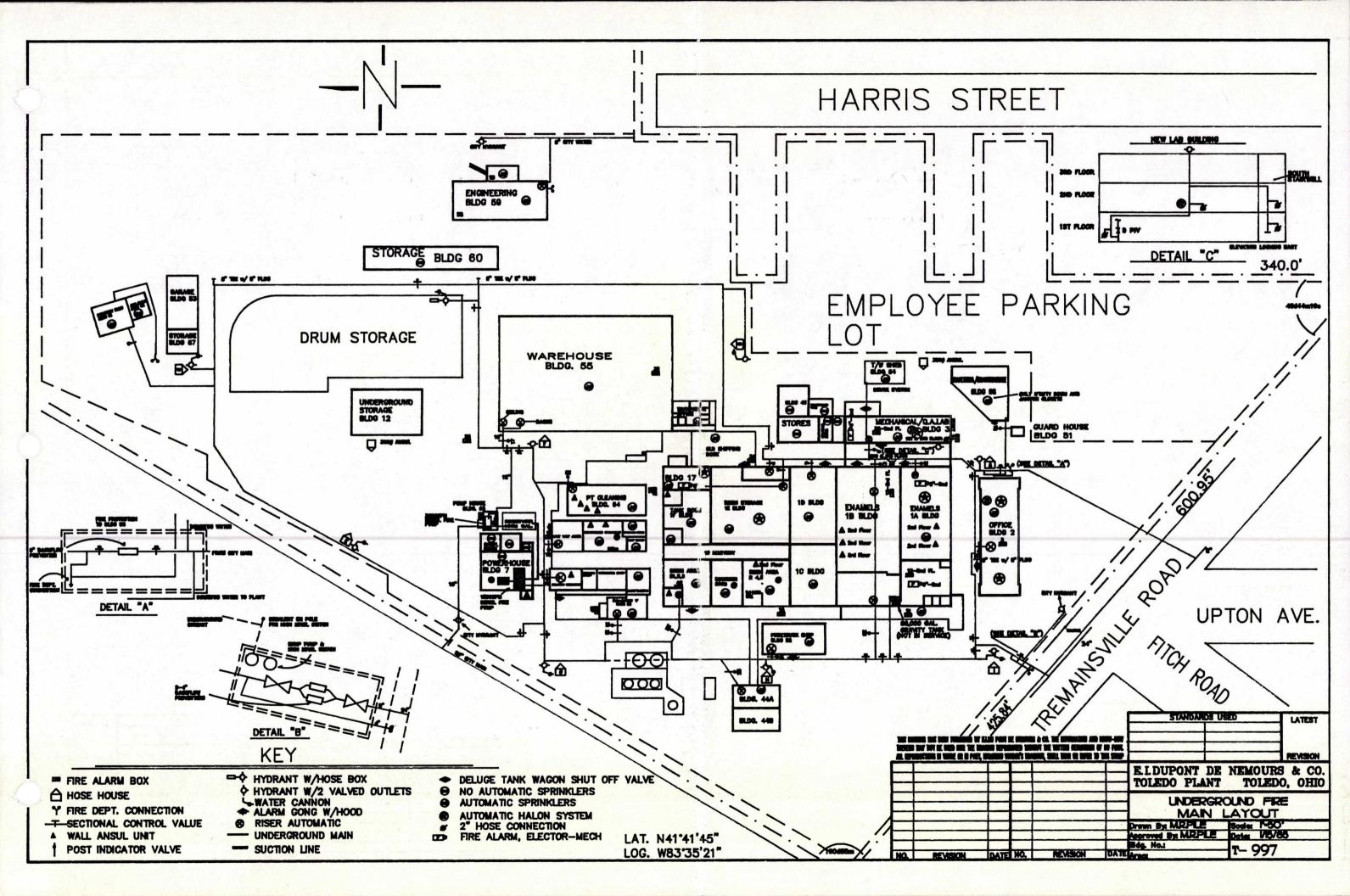
- o Concrete: 6 inches of 3,000 psi (minimum compressive strength at 28 days) concrete; specifications (such as 2" aggregate, 445 lbs. of portland cement/cubic yard, etc.) are given in Du Pont Engineering Standard SB-U-Concrete; Reinforcing is 6 inch by 6 inch welded wire fabric (ASTM Standards A185or A497). Wire conforms to ASTM Standard A82.
- o Black-Top: 2 inches (minimum) of hot-mixed, hot-laid asphaltic concrete, consisting or 1-1/4 inch of binder course and 3/4 inch of wearing course over six inches of stone. Specific compositions, grades, compaction specifications, ASTM Standards applicable, etc. are given in Du Pont Engineering Standards (SC-R-Roads).

No internal traffic control is exercised except by the warehouse supervisor who is notified by a guard of every incoming shipment. Control consists of examining papers and directing truckers to appropriate loading/unloading locations.

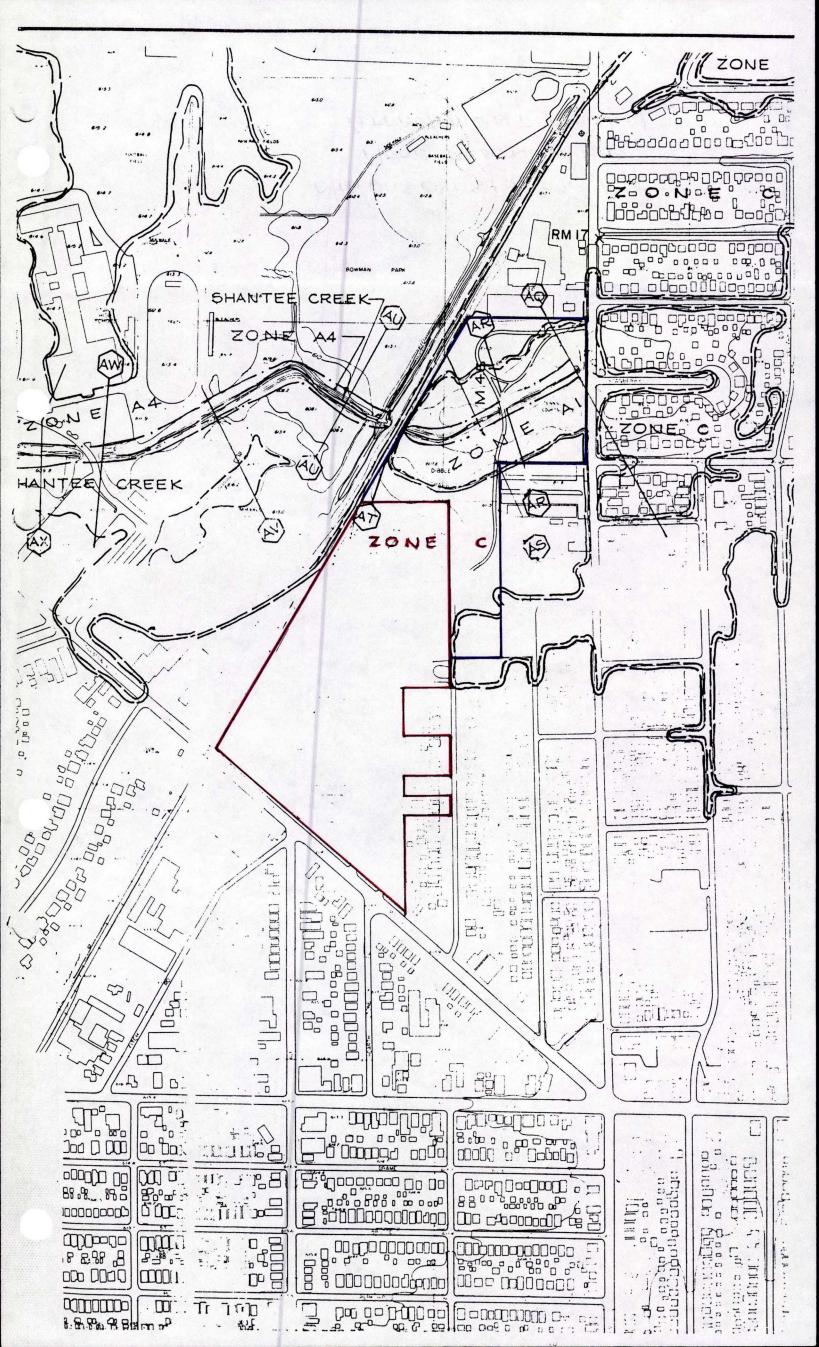
With all permanent roadway surfaces and relatively little HW truck volume (about 3/4] of a truck of HW per day [including-receipts and] shipments—[all] known ahead of time [and-scheduled arrivals]), HW traffic considerations for this storage facility are minimal.

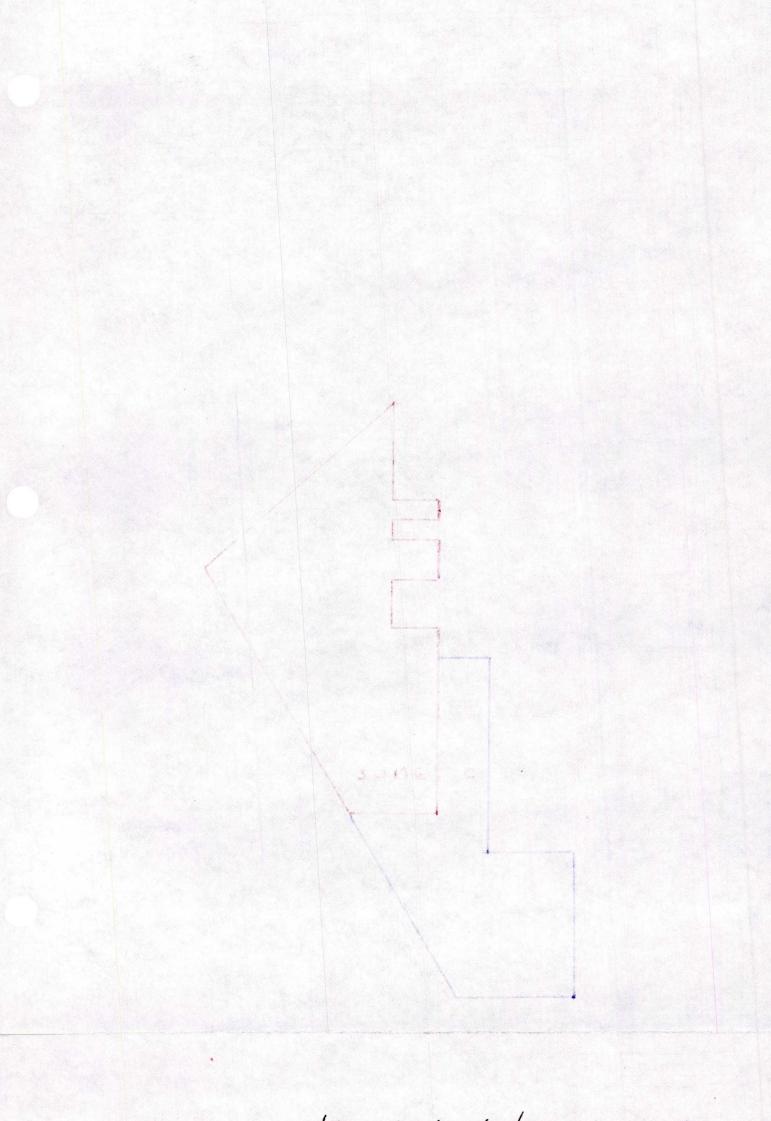


OHD 005 041 843/03-48-0195 SITE MAP ATTACHMENT B-2a-2

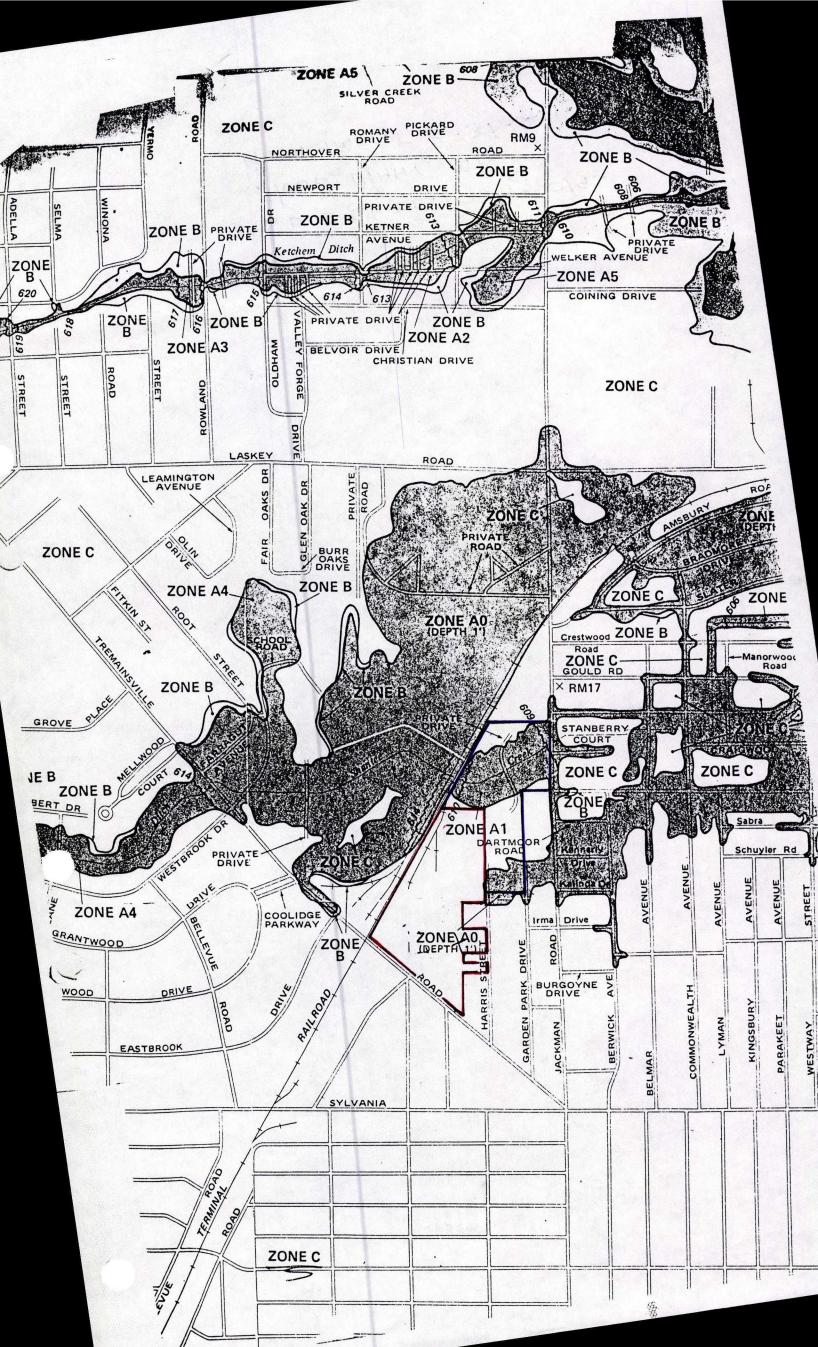


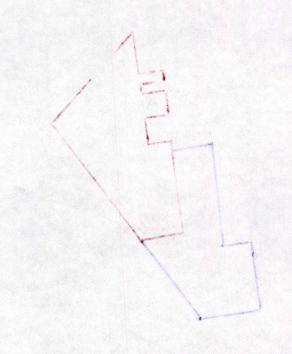
OHD DOS OYI 843/03-48-0195
FIRE MAIN MAP
ATTACHMENT B-29-3



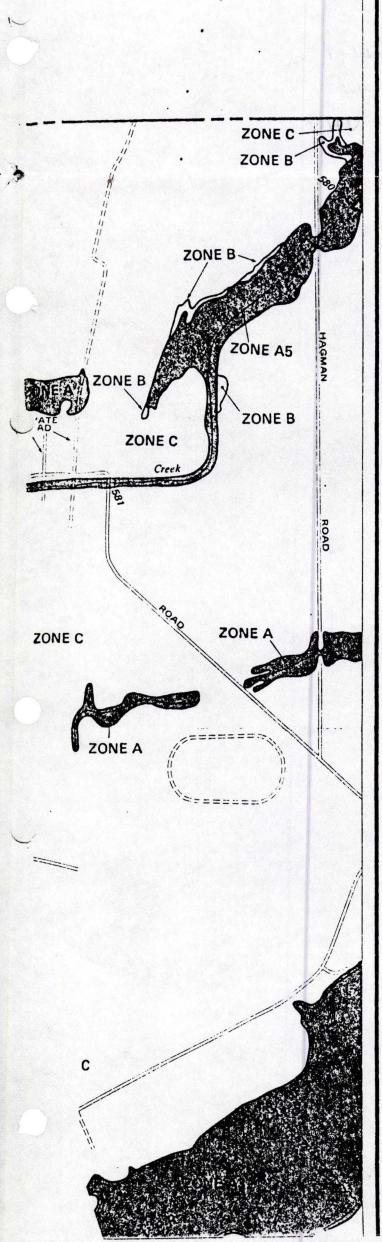


PLOOD PLAIN MAP ATTACHMENT B-36-1





Plood Plain MAP ATTACHMENT B-36-2



**KEY TO MAP** 500-Year Flood Boundary-**ZONE B** 100-Year flood Boundary Zone Designations\* With Date of Identification e.g., 12/2/74 100-Year Flood Boundary **ZONE B** 500-Year Flood Boundary-Base Flood Elevation Line With Elevation In Feet\*\* Base Flood Elevation in Feet (EL 987) Where Uniform Within Zone\*\* RM7× Elevation Reference Mark • M1.5 River Mile \*\*Referenced to the National Geodetic Vertical Datum of 1929 \*EXPLANATION OF ZONE DESIGNATIONS ZONE EXPLANATION Areas of 100-year flood; base flood elevations and flood hazard factors not determined. Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors AO Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors AH Areas of 100-year flood; base flood elevations and flood hazard factors determined. A1-A30 Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined. A99 Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading) B Areas of minimal flooding. (No shading) 0 Areas of undetermined, but possible, flood hazards. Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined. Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors V1-V30 determined.

#### NOTES TO USER

Certain areas not in the special flood hazard areas (zones A and V) may be protected by flood control structures.

This map is for flood insurance purposes only; it does not necessarily show all areas subject to flooding in the community or all planimetric features outside special flood hazard areas.

For adjoining map panels, see separately printed Index To Map Panels.

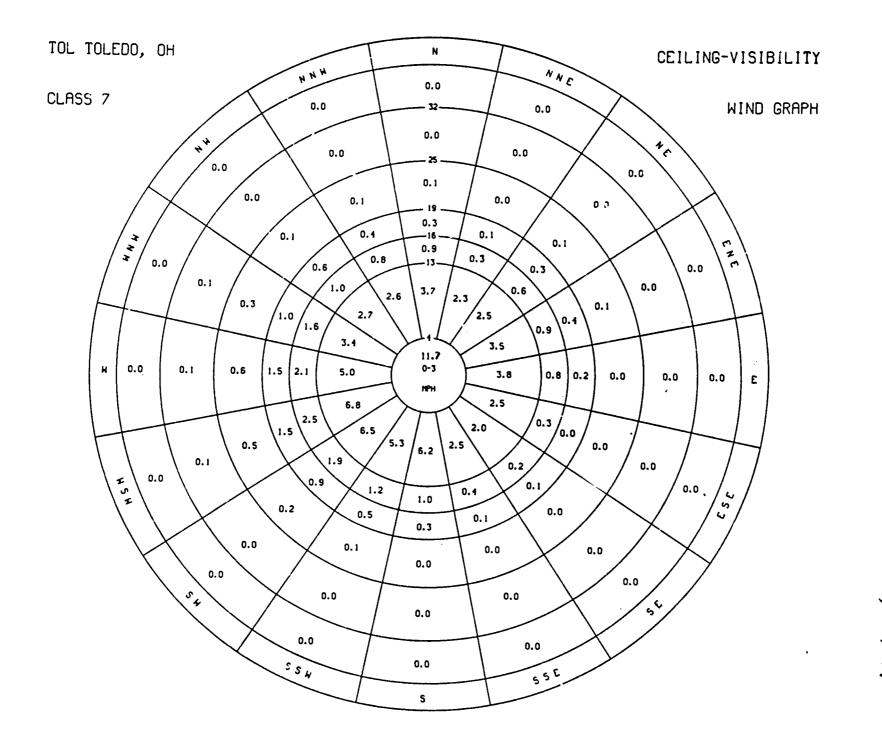
INITIAL IDENTIFICATION : OCTOBER 8, 1976

FLOOD HAZARD BOUNDARY MAP REVISIONS:

FLOOD INSURANCE RATE MAP EFFECTIVE:
JUNE 4, 1980

FLOOD INSURANCE RATE MAP REVISIONS:

DHD OOS DYI 843/03-48-0195 Flood PHAIN MAP ATTACHMENT B-36-3



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL ENVIRONMENTAL SATELLITE, DATA,
AND INFORMATION SERVICE
NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE, NORTH CAROLINA 28801

#### Use of Annual Wind Rose for Climatic Applications

The attached wind rose was originally prepared for the FAA for aviation related applications. The graph depicts wind direction versus wind speed during all weather conditions at a particular airport site. Extreme caution must be taken if this graph is used for other applications for the following reasons:

- 1. The graph is an annual distribution and does not take into account seasonal or monthly variations in wind speed and direction.
- 2. The graph does not take into account daily variations in wind speed and direction. For example, at most coastal locations a land-sea breeze is common during fair weather. During the day at Daytona Beach, Florida, 50.2 percent of all winds are easterly, while 35.3 percent are westerly. At night 33.4 percent are easterly, while 41.8 percent are westerly. Also, during the day 4.0 percent of all winds are calm compared to 12.9 percent at night.
- 3. The graph is for a particular airport site. Depending upon topography, the wind climate could be entirely different only a small distance away.

These problems could have serious implications if the annual graph is used for applications of short duration (hours, days, months). Ecwever, if the application is for time periods greater than a year, the attached graph is representative.



### **FOREWORD**

040 005 041 843 03/48/0195 REVISED 8/28/91

#### INTRODUCTION

Summary tables and graphs have been prepared to assist the FAA in the application of establishment criteria for precision and non-precision approach and landing aids. These tables and graphs depict wind direction and speed under specified ceiling and visibility conditions. This report has been prepared by the National Climatic Center for the FAA under Interagency Agreement No. DOT-FA79WAI-057.

Climatological information for selected airports is presented in 11 volumes:

Volume 1 - New England Region (ANE)

Volume 2 - Eastern Region (AEA)

Volume 3 - Southern Region (ASO)

Volume 4 - Great Lakes Region (AGL)

Volume 5 - Central Region (ACE)

Volume 6 - Southwest Region (ASW)

Volume 7 - Rocky Mountain Region (ARM)

Volume 8 - Northwest Region (ANW)

Volume 9 - Western Region (AWE)

Volume 10 - Alaskan and Pacific

Regions (AAL and APC)

Volume 11 - Visibility Time Series for Key Stations

Summary tables and graphs are presented in volumes 1-10. Graphical time series of visibility measurements for key stations throughout the United States are presented in volume 11 to give the reader some insight into the climate variability that can be expected.

#### ELEMENT CLASSIFICATION

Twelve tables for each station depict wind direction vs. wind speed distributions. Half the tables show daytime distributions for six ceiling-visibility classes, and half show night-time distributions for the same six ceiling-visibility classes. A graphical depiction of the data in each table is also presented. An additional graph for each station depicts the combined day and night winds for all ceiling-visibility conditions.

Wind direction is grouped according to a 16-point compass (N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW) plus calm. The wind speed groups are 0-3, 4-12, 13-15, 16-18, 19-24, 25-31 and equal to or greater than 32 mph.

The ceiling-visibility criteria are defined as:

CLASS 1 = ceiling equal to or greater than 1,500 feet and visibility equal to or greater than 3 miles.

CLASS 2 = ceiling less than 1,500 feet and/or 'visibility less than 3 miles.

CLASS 3 = ceiling less than 1,500 feet and/or visibility less than 3 miles, but ceiling equal to or greater than 400 feet and visibility equal to or greater than 1 mile.

CLASS 4<sup>1</sup> = ceiling less than 400 feet and/or visibility less than 1 mile, but ceiling equal to or greater than 200 feet and visibility equal to or greater than 1/2 mile.

CLASS 5 = ceiling less than 200 feet and/or visibility less than 1/2 mile, but ceiling equal to or greater than 100 feet and visibility equal to or greater than 1/4 mile.

CLASS 6 = ceiling less than 100 feet and/or visibility less than 1/4 mile.

CLASS 7 = all ceiling and visibility conditions; sum of classes 1 and 2; also the sum of classes 1 and 3 through 6.

Time conditions are determined from the onset of civil twilight in the morning to the end of civil twilight in the evening. Civil twilight begins (ends) when the sun is six degrees below the horizon. It covers the somewhat indefinite period before sunrise and after sunset during which natural illumination usually remains sufficient for ordinary outdoor operations. For this report the morning (evening) times of beginning (ending) of civil twilight at a station are determined for the middle of a month. All data within this month are classified as either day or night according to these times.

#### DATA

The data used in the preparation of the climatological tables and graphs were extracted from the National Climatic Center's Tape Deck 1440 Hourly Surface Observations. The data contained in this deck have been digitized from the official observations recorded on station. From about 1948 through 1964 data were digitized for each hour in a day. From 1965 onward only every third hour's data were digitized. The tables and graphs in this report are based on eight observations per day (every third hour) for

- 26 10 84 /EB - 26 10 /84 /EB 19 005 041 843 03/48/0195 REVISES 8/28/91

Interagency Agreement DOT-FA79WAI-057

# WIND-CEILING-VISIBILITY DATA AT SELECTED AIRPORTS

January 1981

This report has been prepared by the U. S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data and Information Service, National Climatic Center, Asheville, North Carolina for the Office of Aviation Policy and Plans, Federal Aviation Administration under Interagency Agreement No. DOT-FA79WAI-057. The contents of this report reflect the views of the contractor, who is responsible for the facts and accuracy of the data presented herein, and do not necessarily reflect the official views or policy of the FAA. This report does not constitute a standard, specification or regulation.

the entire period of record. This was done to eliminate the data bias problems that would have been created by trying to mix the 24 observations per day prior to 1965 with the 8 observations per day after 1964.

The effect on the climatology of not using all the available data was examined for representative key stations in each region. Monthly day and night distributions were prepared for all ceiling-visibility criteria and wind speed and direction groups using 24 observations per day. A data subset was created by extracting every third observation from the hourly data set. and similar frequency distributions were The Kolmogorov-Smirnov prepared. test was applied to evaluate the hypotheses that distributions using 24 observations per day are statistically the same as distributions using 8 observations per day. The results: of this procedure indicate equality

of distributions. Therefore, no significant information has been lost by basing the climatologies on 8 observations per day.

The tables and graphs are also available on microfiche, and the summarized data are available on magnetic tape. This report presents annual summaries, but monthly summaries can be generated on magnetic tape. Requests for microfiche copies of this report and for data on magnetic tape should be addressed to:

Director National Climatic Center Federal Building Asheville, NC 28801

The requested microfiche copies and/or tapes will be provided at cost.

#### TABLE LEGEND

A = number of day (night) observations in a given ceiling-visibility class, wind speed class and direction divided by the total number of day (night) observations in ceiling-visibility classes 1, 3-6, all wind speed classes and directions times 100.

B = number of day (night) observations in a given ceiling-visibility class, wind speed class and direction divided by the total number of day (night) observations in the given ceiling-visibility class and direction times 100.

C = number of day (night) observations of a given direction divided by the total number of day (night) observations in ceiling-visibility classes 1, 3-6 times 100.

D = number of day (night) observations of a given direction divided by the total number of day (night) observations in the given ceiling-visibility class times 100.

E = number of day (night) observations in a given wind speed class divided by the total number of day (night) observations in ceiling-visibility classes 1, 3-6 times 100.

F = number of day (night) observations in a given wind speed class divided by the total number of day (night) observations in the given ceiling-visibility class times 100.

G = number of day (night) observations in the given ceiling-visibility class divided by the total number of day (night) observations in ceiling-visibility classes 1, 3-6 times 100.

100 = summation of column D = summation of row F.

H = average wind speed for the given day (night) ceiling-visibility class and direction.

I = average wind speed for the given day (night) ceiling-visibility class.

J = overall period of record; see station list for actual years of record used.

Note: Ceiling-visibility class 2 is the sum of classes 3-6.

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## CEILING-VISIBILITY WIND TABULATIONS

ANA

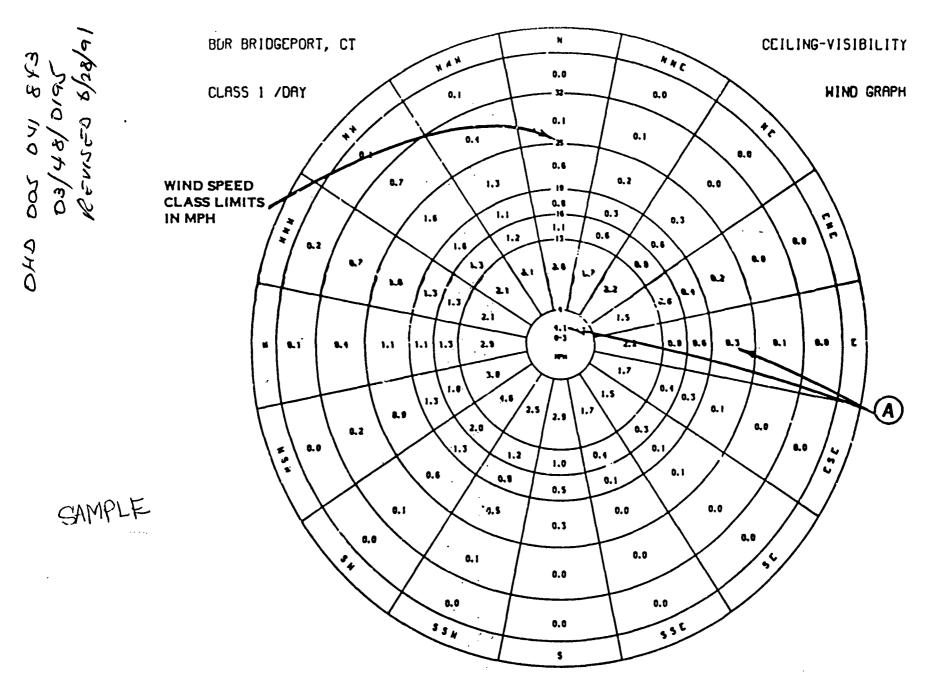
ANNUAL

STATION NAME: BOR BRIDGEPORT. CT

PERÍOD: 1949-1978

CLASS 1 / DAY

				0000	•				
STATION NU	MBER: 94702	?						NO. OBS	.: 29909
	$\bigcirc$	<b>(B)</b>			•		(0	(a) (c)	
,		<u> </u>			·			7	
		SPEED GROUPS (MPH)							
	0-3	4-12	13-15	16-18	19-24	25-31	32+	TOTAL	AVG HIND
R	A B	A B	A 3	A . B	A B	A B	A B	CO	SPEED
N	. 3 3	2,6: 3,1	1,1:1,4	.8 .9	.68	1: 1	.0 .0	5.5: 6.6	12.6
NNE	.2: .3		6 7	.34	.2 .3	1: 1	0.0	3.2: 3.8	11.3
NE	3: 4	2.2: 2.6	9:10	.67	.3 .4	.0. 0	.0 .0	4.3: 5.1	11.5
ENE	٤. ٤.	1,5 1,8	.6: .7	4 5	. 2 3	.0: 1	.0: .0	3.0: 3.5	11,7
3	.2: .2		.8: 1,0	.6 .7	3: 4		0: 0	4.2:5.0	11,9
ESE	1: 1		4 5	37.1		.0: 0	.0: .0	2.7: 3.2	10.9
Ş E				1 - 1 - Pa		1.0:10	.0: .0	2.2: 2.6	9.8
5 5 E			(4.1)		1	.0: .0	0: 0	5.3 5.8	9.8
	. 2: . 2		1		4	N e	٥. ٥. ٠	5.0 5.9	$\frac{11.4}{12.9}$ $(H)$
5 S H	1: 1		43111	1 9 U 1 V 1		1 1	0 0	5.3 6.3	/ <b></b>
5 H	3	4.6 5.4	24	1,3 1.6	6; 7		0;0	8.8:10.5	12.1
н 5 н	.2: .2		1,8: 2,2	1.3: 1.5	9 1.0	.2 .2	<u> </u>	8,1 9,6	13.1
- <u>W</u>	1: 2		1.3: 1.6	1,1,1,4	1,1,1,3	-4 5		7.1: 8.5	14.4
HNH	2: .2		1,3: 1,6	1,3.1,6	1,6:1,9	7: 9	.1 .2	7.5 8.8	16.3
N N N	.2 .2		1.2 1.4	1,1:1,3		.4 .5		6.3: 7.5	16.0
CALH	1,1:1,3	<u> </u>		: 1.1.	<del></del>	<del></del>	<del></del>	1.1: 1.3	<del></del>
TOTAL		38 2:45 3	16 4 19 5	12 3:14 6	9,8:11,7	3.0 3.5	.6: .7	84.3: 100	13.0
(	1	3916:4213	( , 0 , - ; , 2 , 2 , 2			3,0: 3,31	/	7 7	
_							$\angle$		$\nearrow$
' (	E) (F)						G	) -{100)	(I).



A-NUMBER OF DAY (NIGHT) OBSERVATIONS IN A GIVEN CEILING-VISIBILITY CLASS, WIND SPEED CLASS AND DIRECTION DIVIDED BY THE TOTAL NUMBER OF DAY (NIGHT) OBSERVATIONS IN CEILING-VISIBILITY CLASSES 1, 3-6, ALL WIND SPEED CLASSES AND DIRECTIONS TIMES 100.

#### Section C WASTE CHARACTERISTICS

#### C-1. Chemical and Physical Analysis; OAC 3745-54-13(A)(1)

RCRA regulations require each Hazardous Waste generator (Section 261.1) to make a determination of the applicability of those regulations to each waste stream in this manner:

- 1. Determine if it is a <u>solid</u> <u>waste</u> as defined in Section 261.2.
- 2. If it is a <u>solid waste</u>, then determine if it is <u>hazardous</u> waste by this procedure in Section 262.11:
  - a. Determine if the waste is <u>excluded</u> under Sections 261.4 and 261.5 or <u>exempted</u> under Section 261.6(a).
  - b. If not, determine if it is a <u>listed waste</u> in Subpart D of 40 CFR 261.
  - c. If not, he must finally determine if the waste can be identified as a <u>hazardous waste</u> under Subpart A of 40 CFR [261] 262.11 by <u>either</u> (emphasis added):
    - (1) Testing for the characteristics of hazardous waste under Subpart B, Section 261.10(a)(2)(i); or
    - (2) Testing the waste according to the methods set forth in Subpart C OF 40 CFR Part 261, or according to an equivalent method approved by the administrator under 40 CFR 260.21; or
    - (3) <u>Reasonably detected</u> by generators of solid waste through their knowledge of their waste. As <u>all</u> wastes for this storage facility are generated on

the site by well known and documented processes and formulas, our chemical data for all batch ingredients allows us to know enough about these waste streams to accurately determine their hazard characteristics. In fact, our chemical data knowledge of the components and their flash points, heavy metals content, etc. has lead us to identify all of the solvent-based liquid paint waste streams to be ignitable and, therefore, hazardous wastes.

For site purposes, once the waste is identified as hazardous by either listing or determination from composition, no further testing is required on site. Additional analysis is performed by the hazardous waste disposal firms contracted. Managing the waste as ignitable -as we do all our raw materials, intermediates and finished products - can be accomplished successfully without further detailed knowledge that unnecessary and expensive testing would provide on a given sample. However, remembering that the wastes come from a variable mix of thousands of individual formulas, no sampling frequency (short of 100 percent) would be satisfactory to analyze for precise content.

Under Section 264.13(a)(1) before an owner or operator treats, stores, or disposes of any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with the requirements of this part and Part 268

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his chapter or with the conditions of a permit issued under Part 270 and Part 124 of this chapter.

Under Section 264.13(a)(2) The analysis may include data developed under Part 261 of this chapter, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes. Under Subpart B, Section

261.10(a)(2) the characteristics can be: (ii) <u>Reasonably</u> detected by generators of solid waste through their knowledge of their waste.

The detailed characterization by technical personnel of wastes from known processes using known batch formulations at this site provides this information.

A complete set of current Waste Characterization Forms (WCFs) the site is attached. Some of these waste streams do not fit any RCRA criteria but are deemed hazardous enough from an industrial hygiene basis or from other regulation (e.g., asbestos) to warrant sending them to secure chemical landfills. Some other of these WCFs are part of a disposal contract just in case they are suddenly generated (i.e., "WOT-8, unreacted/partially reacted monomers", which represents a resin batch which did not properly react).

Corrosive wastes are sometimes generated on this site. These wastes are generally caustic water solutions used to clean resin reactors, and are in the pH range of 11.5 to 13.5. The pH of these corrosive wastes is adjusted to 6.5 to 9.5 and the wastewater is shipped to a RCRA permitted water treatment facility for disposal.

tive wastes are inhibited with a special solution to prevent an

exothermic polymerization reaction before the material is shipped to a permitted RCRA facility for incineration.

The changes reflected in this Part B permit modification do not change the composition or hazardous characteristics of the wastes generated at this site. Therefore, the detailed description of the chemical and physical analysis, test methods and frequency, etc., found in the original Part B permit application still apply.

Sampling methods for waste characterization purposes when required will be carried out according to Section C-2c of this permit application.

#### C-1a CONTAINERIZED WASTES

All of the site's hazardous wastes, including any solid (free of liquid) wastes are stored in a RCRA permitted storage area. There are no restrictions on this storage area regarding "free liquids". The details of the storage area are outlined in Section D-1a(3) of this permit application.

#### C-1b WASTE IN TANK SYSTEMS

SEE ATTACHMENTS C-1-1 THRU C-1-80.

The four (4) tanks listed in this permit application are intended to handle the following wastes generated on this site on an ongoing basis:

- Tank #1. Accumulation tank for dirty wash solvents used in the paint manufacturing area.
- 2. Tank #14. Storage tank for dirty wash solvents pumped over from tank #1, and reused wash solvent from portable tank

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- cleaning, and feed tank to solvent recovery operations.
- 3. Tank #W9. Accumulation/storage tank for waste solvents from the resin manufacturing area, and feed tank to the site's packaged boilers for fuel.
- 4. Tank #W10. Accumulation/storage tank for solvent recovery still bottoms to be shipped off-site for use in a fuel blending program.

This tank system is intended to process [2] 3 of our waste streams; WOT-12 solvent recovery sludge, [and] WOT-16 waste wash solvent, AND WOT-16B WASTE STRIP SOLVENT (BOILER FUEL). [Both] ALL of these waste streams have been identified for their hazardous characteristics according to Section C-1 of this permit application, and copies of our waste characterizations are included.

THIRTEEN (13) TANKS FORMERLY USED AS RCRA STORAGE TANKS ARE IN THE PROCESS OF CLOSING AND ARE STILL SHOWN ON ALL DRAWINGS AND ATTACHMENTS.

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#### TOLEDO APD WASTE CHARACTERIZATIONS

SITE		,
WOT NO.	NAME OF WASTE	LAST REVIEWED
	Section 1997	
<del>[2</del>	- Paint-Contaminated Materials	-see-WOT-17-]
3	Waste Pigment Dust, Mixed	10-19-90
5a	Waste Heat Transfer Oil, (DOWTHER(R))	
٠.	(Contaminated w/Water)	10-19-90
[-7	- Empty-Aorylonitrile Drums	—see WOT-7a]
[ <del>7a</del>	Acrylonitrile-Drums/Decontaminated	04-22-87-
<b>7</b> B	ACRYLONITRILE	10-19-90
8	Unreacted/Partially Reacted Monomers	10-19-90
9	Waste Resins (Polymers)	10-19-90
12	Solvent Recovery Sludge	10-19-90
13	Waste Paint Liquid	10-19-90
15	Waste Asbestos Insulation	10-19-90
16A	EXCESS Waste Wash Solvent	10-19-90
16B	WASTE STRIP SOLVENT (BOILER FUEL)	10-19-90
17	Paint Contaminated Materials	10-19-90
[ <del>17a</del> —	-Empty-Acrylic-Acid-Drums, Plastic	02-22-87}
[18a	-Glycidyl-Methacrylate-Drums/Decontaminate	d-02-22-87-]
18B	GLYCIDYL METHACRYLATE	10-19-90
19	METHYL ACRYLATE	10-19-90
20	PARTIALLY DECOMPOSED INITIATOR, IN WATER	10-19-90
21	REACTION KILL SOLUTION	10-19-90
29	MONOMER KILL SOLUTION	10-19-90
50A <del>[ 9</del> 9	H Waste Water, corrosive	10-19-90

CONTAIN VARIOUS SOLVENTS AND ARE ALL IGNITABLE LIQUID HAZARDOUS WASTES, THEY ARE ALL RESTRICTED FROM LANDFILLING. BASED ON THIS GENERATOR KNOWLEDGE, ALL OUR HAZARDOUS WASTES ARE EITHER SENT OFF-SITE TO AN INCINERATOR OR FUEL BLENDING.

## <u>C-2b</u> <u>Test Methods</u>; OAC 3745-54-13(B)(2)

As outlined in C-1, all our wastes are self-generated and characterized from known processes and formulations. Most are a composite of tens or hundreds of finished product codes—but exhibiting a common hazard denominator, ignitability. The characterizing procedure is as follows:

- A waste stream is defined by the Solid Waste Coordinator (see C-3, Sampling Method),
- 2. WITH ASSISTANCE FROM a chemist or engineer familiar with the generating process, the senior environmental coordinator determines the product(s) that would be present, and using the chemical data and the formula files, computes the average concentration range for major ingredients and indicates trace items.
- Then other data on physical state, hazard designations, safety considerations, etc. are indicated.
- Additional descriptions and/or hazard warning information may be appended.
- 5. The site DOT coordinator is then consulted to select proper containers and DOT shipping name, class, number, etc.
- 6. A final review by the senior environmental coordinator

3 m

completes the process.

It should be noted that this review can result in a waste being found not a RCRA hazard waste. If there is any doubt, flash points might be run using the Setaflash Closed Cup Tester and ASTM D-3278-78 standard in the plant laboratory. If necessary, the [Extraction Procedure Toxicity test] TCLP WOULD BE [, as detailed in 40 CFR 261-24 at FR 33122 et seq (May 19, 1980), is] run by the [F&FP] AP Department's Process Engineering Group at Marshall Laboratory, Philadelphia.

Should a totally unknown waste be found on the site (by operator error, mislabeling, etc.), the plant laboratory has gas chromatography capability to identify solvents, [--] AND INFRA-RED EQUIPMENT TO IDENTIFY OTHER CATALOGUED CHEMICALS. As mentioned in C-1, this characterizing process is applied to possible waste streams that require prompt incineration. The WCF is made part of a contract for this eventuality with a RCRA incinerator operator.

AS OUTLINE IN SECTION C-2b, NO TEST NEED TO CONDUCTED TO DETERMINE LAND DISPOSAL RESTRICTIONS.

#### <u>C-2c.</u> <u>Sampling Methods:</u> OAC 3745-54-13(B)(3)

Determination of A unique waste streams in the plant is done by the senior environmental coordinator and Area Supervisors.

Whenever the generating area has a new waste stream, it is reviewed for fit to existing WCF's; if not, a new WCF is prepared (see C-2b). As discussed above, there is normally no sampling needed to effectively characterize the waste stream.

If an unknown waste is generated, it would be sampled according

to the prescribed protocol of Section 261, APP.I.

## C-2d. Frequency of Analysis

WCF's are prepared whenever a new waste stream is encountered(or anticipated). Since most of these are part of an off site waste disposal contract, they are reviewed each time a contract is renewed. Significant changes in process or product mix are cause for review of the effected WCF's. The WCF's are reviewed at least once a year.

C-2e Reserved

<u>C-2f</u> <u>Additional Requirements for Ignitable, Reactive or Incompatible Waste;</u> OAC 3745-54-13(B)(6), 3745-54-17

CHAPTER 3745-54-13(2); GENERAL WASTE ANALYSIS. THE ANALYSIS MAY INCLUDE DATA DEVELOPED UNDER CHAPTER 3745-51 OF THE ADMINISTRATIVE CODE AND EXISTING PUBLISHED OR DOCUMENTED DATA ON THE HAZARDOUS WASTE OR ON HAZARDOUS WASTE GENERATED FROM SIMILAR PROCESSES.

CHAPTER 3745-51-10(B)(2); REASONABLY DETECTED BY GENERATORS OF WASTE THROUGH THEIR KNOWLEDGE OF THEIR WASTE. AS OUTLINED IN SECTION C-1(2)(3), ALL WASTES AT THIS STORAGE FACILITY ARE GENERATED BY WELL KNOWN AND DOCUMENTED PROCESSES AND FORMULAS, NO ADDITIONAL REQUIREMENTS ARE DEEMED NECESSARY.

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## C-3. WASTE ANALYSIS REQUIREMENTS PERTAINING TO LAND DISPOSAL RESTRICTIONS

Under Section 268.7(a) the generator must test his waste or an extract developed using the test method described in appendix I of this part, or use knowledge of the waste, to determine if the waste is restricted from land disposal under this part.

Except for our waste stream WOT-3, all other active waste streams have been determined to be restricted from land disposal and have been handled that way since 1981. Waste analysis of restricted from land disposal wastes are conducted as outlined in Section C-1 of this permit application.

C-3a RESERVED

# C-3a(1) WASTE CHARACTERIZATION, RESTRICTED WASTE TREATMENT STANDARDS; OAC 3745-59-30(A)

SECTION C-2(f) APPLIES.

C-3b RESERVED

## C-3b(1) RETENTION OF GENERATOR NOTICES AND CERTIFICATION; OAC 3745-59-07(A)(6)

ALL GENERATOR NOTICES AND LAND DISPOSAL RESTRICTION

CERTIFICATIONS ARE BE RETAINED AT THE SITE FOR A PERIOD OF FIVE (5)

YEARS.

## C-3b(2) NOTIFICATION AND CERTIFICATION FOR WASTE TO BE FURTHER MANAGED; OAC 3745-59-07(B)(6)

AS REQUIRED UNDER CHAPTER 3745-59-07(A)(1), ALL REQUIRED INFORMATION ON THE NOTICES AND CERTIFICATIONS WILL BE PROVIDED.

## OHD-005041843 / 03-48-0195 Revised 11/19/1987; 10/03/1989; 06/28/1991

## C-3c RESTRICTED WASTE STORAGE; OAC 3745-59-50(C)

SINCE ALL OUR HAZARDOUS WASTES ARE RESTRICTED FROM LAND
DISPOSAL, STORAGE IN THE PERMITTED AREAS IS LIMITED TO A PERIOD OF
ONE (1) YEAR. ALL CONTAINERS ARE DATED AT TIME OF PLACEMENT IN THE
STORAGE AREA.

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WASTE CHARACTERIZATION FORM (WCF) E.I.DUPONT DENBHOURS & CO. DATE :October 19, 1990 " 1 OF 1 LOCATION: TOLEDO APD. CONTRACTOR'S CODE: WPS-32171 RPA T.D.# : OHD-005041843 DUPONT CODE: WOT-03R A\K N/A O STATE : N/A EPA CODES : DOOS DOO6 D007D008 N/A N/A WASTE PIGHENT DUST, MIXED II. NAME OF WASTE: III. COMPOSITION: A. MAJOR C.ONE TIME OR D. CONCENTRATION RANGE E.EXPOSURE LIMITS COMPONENTS TYPICAL ANALYSIS UPPER LOWER +ACGTH ++OSHA Lead / Zinc Chromates 1.68% 1.68% 0.80% .05mg/m3.05mg/m3 65.50% 65.50% 69.00% Iron Oxides, Extenders, Other Organic Pigments 10mg/m3 10mg/m3 Zinc. Manganese 0.26% 0.26% 0.20% 10mg/m3 10mg/m3 Titanium Dioxide 32.56% 30.00% 10mg/m3 10mg/m3 4. 30.90% 5. n/a 0.00% 0.00% 0.00% n/a n/a ĥ. n/a 0.00% 0.00% 0.00% n/a n/a B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPM) DORS THE WASTE CONTAIN: Sb 782.70 \*Br 0.00 Co 238.19 Pb 11747.00 0.00 SULFIDES: AMT: N/A Ag As 2.35 Cd 52.48 4378.41 50.56 283.17 CYANTORS: NO AMT: N/A Cu Mn Sr Ba 104120.00 Сe 0.00 \$P 0.00 Hg 0.54 0.00 PCB'S: NO AMT: N/A \$S 5.29 Вe 0.00 #01 0.00 **\$**T 0.00 Ni 798.61 Tl PHENOLICS: MO AMT: n INSEC'CIDES: Bi 227.30 Cr 3698.00 Fe 101610.00 \$N 0.00 Sn 161.10 NO AMT: N/A Soluble Salts: 0.00 ‡P 0.00 Zn 144826.00 PESTICIDES: NO AMT: N/A OTHER: AMT:n/a AMT: N/A 0.16 7.r 0.00 HERBICIDES: Se none RODEN'CIDES: NO AMT: N/A NO SHOW TEST METHOD USED> EPTOX/TCLP: TOT. METALS: DIOXINS: AKT: N/A TV. PHYS.STATE @ 25\*C (ENTER): 0.00% SOLID LISTED SOLVENTS: AMT: FIS THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED? YES HALOGENS >1000Mg/L: MO ANT: 0.00 \*MULTI - PHASED? 100.00% SOLID VOL % OF RACH PHASE: 0.00% LIQUID \*CAN THE WASTE BE PUMPED? NO 0.00% VOLUME POURED?NO XPREE PLOWING LIQUID LAYER: \*PRESSURE OF CONTAINER: N/A % SEPARATE PHASE WATER: ESTIMATED SPEC. GRAV: 3.00 +/- 1.0 ٧. SHIPPING CONTAINERS: BULK: n/a AMT:n/a MC CODE:n/a MTRL OF APPROX WOHT CONTAINER PRR CHINR TYPE SIZE CONSTRUCTION LABRL USED DOT SPEC DRUMS: 17H,17E 55G STEEL 17H,17B 425 N/A OTHER SIZE: N/A N/A N/A N/A N/A N/A VI. PROPERTIES: FLASH POINT(CC): >240F BTU/LB: 0 CORROSIVE? MO COLOR: 5 -ODOR: NO N/A Vari/Gray Ph: ٩ OSHA CARCINOGEN? YES ASH CONTENT X: 12.00% Lead/Zinc Chromates TOXIC ?(EXPLAIN) YES REACTIVE? NO n/a PYROPHORIC ? NO RADIOACTIVE? NO NO SHOCK SENSITIVE? NO EXPLOSIVE?NO ETIOLOGICAL? OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPING INFORMATION D.O.T.SHIPPING NAME:RQ, HAZARDOUS WASTE SOLID, N.O.S., ORM-B, NA9189 D005 D006 D007 D008 N/A N/A N/A D.O.T. HAZARD CLASSIFICATION: D.O.T. PLACARD: none U.N.NO.:n/a D.O.T. LABEL: N.A.NO.: NA9189 none VIII. VOLUME: ANNUAL: PER SHIPMENT: 20 drs THIS REQUEST:n/a 10 drs REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS) NOTE #1: MSDS's for ingredients attached NOTE #2: n/a NOTE #3: n/a NOTE #4: n/a

PREPARED BY:

A. PARCHOMENKO

MANIFEST NUMBER: NAME OF WASTE:

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1 OF 2

N/A

D008

D006 D007

isposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 RPA ID.NO.: OHD 048415665

WASTE PIGNENT DUST, MIXED

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)

N/A N/A N/A 0

CONTRACTOR'S CODE: WPS-32171

EPA CODES: DO05

FRUM LOCATION & ADDRESS: TOLEBO APD, 1930 Tremainsville Rd., Toledo, OH 43513 (Ph.419-478-1211) CONTRACTOR'S CODE: WPS-32171
DUPONT EPA I.D.: OHD-005041843 DUPONT WASTE CODE: WOT-03R OHIO EPA CODE: N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS!
THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A NATIONAL CAPACITY VARIANCE OR CASE-BY-CASE EXTENSION!

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CPR PART 268. IN ACCORDANCE WITH 40 CPR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

#### IS THIS WASTE A WASTEWATER ?: NO

REST!	RICTED SOLVENTS PRESENT	EPA WASTE	EPA WASTE	Conc Wstwtrs co	entration Intai-		er spent	•				
ALL A	APPLI E TCC's & F001-F005			ning spent			-	Constituent Name			l(Mg/L) Treatment .Reg.LevStandard	Mark All Applicable
	Acetone	 N/A	 N/A	0.00	0.050	0.0	n.590	Arsenic	 Na	2.348	500 None	NO
	Benzene	N/A	N/A	0.00	0.070	0.0		Cadmium	1441	2.348		NO
NO		N/A	N/A	0.00	5.000	0.0		Chromium(CrVI)		3698		YES
	Carbon disulfide	N/A	N/A	0.00	1.050	0.0		Cyanide		N/A	1000	NO
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	•		11747	500	YES
	Chlordane	N/A	N/A	0.00	0.050	0.0		Hercury		0.543		NO
	Chlorobenzene	N/A	N/A	0.00	0.150	0.0		Nickel		798.61		YES
	Chloroform	N/A	N/A	0.00	0.000	0.0		Selenium		0.163		NO
	Cresols,o,m,p(cresylic	•	N/A	0.00	2.820	0.0		Thallium		5.29		NO
	Cyclohexanone	N/A	N/A	0.00	0.125	0.0		Liquids w/PCB's		N/A	50 Incinr'tn	NO
NO	· · ·	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC's		N/A	>0.99% Incinr'tn	NO
NO		N/A	N/A	0.00	0.650	0.0		Solids w/ HOC's			>1000mgIncinr'tn	NO
NO		N/A	N/A	0.00	0.000	0.0		*Halogenated organ	nic compo			
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000		are compe			
NO		N/A	N/A	0.00	0.000	0.0	0.000					
NO	•	N/A	N/A	0.00	0.000	0.0	0.000					
	Endrin	N/A	N/A	0.00	0.000	0.0	0.020					
	Ethoxyethanol	N/A	N/A		Inci/Bio		Incin					
	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750					
	Sthyl benzene	N/A	N/A	0.00	0.050	0.0	0.053					
	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750					
	Heptachlor (& its hydro	-	N/A	0.00	0.000	0.0	0.000					
	Hexachloro-1,3-butadien		N/A	0.00	0.000	0.0	0.000					
	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
	Isobutanol	N/A	N/A	0.00	5.000	0.0	5.000					
	Lindane	N/A	N/A	0.00	0.000	0.0	0.400					
	Methanol	N/A	N/A	0.00	0.250	0.0	0.750					

DATE:October 19, 1990

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

N/A

D008

" 1 of 3

BPA CODES:

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LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

II. NAME OF WASTE: WASTE PIGNENT DUST, MIXED

D005 D006 D007

CONTRACTOR'S CODE : WPS-32171

DUPONT CODE: WOT-03R

N/A N/A N/A BRR STATE : N/A

Other identified constituents present		BPA W		EPA WASTE CODE	Wstwtrs c	t solvents STD	/1) All other solvent w WASTE	astes STD	Level( Conc'n.R	eg.Lev.
NO .	Acetic Anhydride		0	N/A	0.00	0.00	0.00	0.00	0.00%	
	Acrylic Acid			N/A	0.00	0.00	0.00	0.00	0.00%	
	Acrylonitrilre		0	N/A	0.00	0.00	0.00	0.00	0.00%	
	Aliphatic Hydrocarbon	N/A		N/A	-0.00	0.00	0.00	0.00	0.00%	
	Aluminum Oxide			N/A	0.00	0.00	0.00	0.00	0.00%	
	Ammonia			N/A	0.00	0.00	0.00	0.00	0.00%	
	Amyl Acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
-	Benzoquinone			N/A	0.00	0.00	0.00	0.00	0.00%	
	Butoxyethanol	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Acrylate			N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Aldehyde, Oxide	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Benzyl Phthalate			N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Catechol, tertiary	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
)	Butyl Peroxy	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyl Peroxy Acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butylene Glycol	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Butyrol Acetone	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Calcium		0	N/A	0.00	0.00	0.00	0.00	0.00%	
	CRESOLS		err		0.00	0.00	0.00	0.00	0.00%	
	Cyclohexyl Amine	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
, .	D		0	N/A	0.00	0.00	0.00	0.00		
	D-ethyl Gly M-butyl E-Acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	D-ethyl Gly M-butyl Bther	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
<b>N</b> O 1	D-ethyl Gly Methyl Bther	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	Diacetone Alcohol	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	Dibasic esters	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
NO 1	Dibutyl Phthalate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO 1	Dibutyltin Dilaurate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	Dichlorobenzene	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
		N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Diisobutyl Ketone	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Dimethyl dodecylamine	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Dimethyl Hydroxy Ethyl Amine	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Dimethyl Polysiloxane	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Diphenyl	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Diphenyl Oxide	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Rster Alcohol	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Bther	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Ethoxyethanol	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
	Ethyl 3-ethoxy propionata	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	
NO I	Sthyl Aceto Acetate	N/A		N/A	0.00	0.00	0.00	0.00	0.00%	0.00

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OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

₹ 2 of 3

BPA I.D.#:

EPA CODES:

LOCATION: TOLEDO APD,

OHD-005041843

D006

D007

D008

N/A N/A

N/A N/A

ERR

STATE : N/A

CONTRACTOR'S CODE : WPS-32171

DUPONT CODE: WOT-03R

D005 II. NAME OF WASTE: WASTE PIGNENT DUST, MIXED

No		her non-listed nstituents present	CODE	E BPA WASTE CODE	Wstwtrs co ning spent WASTE		All other s solvent was WASTE			
MO	NO	Bthyl Acrylate				0.00	0.00	0.00	0.00%	0.00
NO   Ethyl Giy   Methyl E-Acetate   N/A   N/A   0.00   0	NO	Ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO   Sthylene Glycol	NO	Ethyl Gly M-butyl Ether	N/A	N/A	-0.00	0.00	0.00	0.00	0.00%	0.00
NO   Ethylene Glycol   N/A   N/A   0.00	NO	Ethyl Gly K-ethyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO	NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO	NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO	MO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO   Glycerin   N/A   N/A   0.00	NO	Formaldehyde	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO   Beptane   M/A   M/A   0.00   0	NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO   Heptane	NO	Glycol Ethers	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	NO	Heptane	N/A		0.00	0.00	0.00	0.00	0.00%	0.00
NO	NO	=				0.00	0.00		0.00%	0.00
No	NO	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
RO   Isobuty  Acetate	0	Hydrocarbon Solvent	N/A		0.00	0.00	0.00	0.00	0.00%	0.00
NO   Isophorone	0'n	Isobutyl Acetate	N/A		0.00	0.00	0.00	0.00	0.00%	0.00
NO		Isophorone					0.00			
NO Lithium Hydroxide Monohydrate N/A N/A 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.		· · · · · · · · · · · · · · · · · · ·								
NO										0.00
NO		· · · · · · · · · · · · · · · · · · ·	-							
NO         Methyl Acrylate         N/A         N/A         0.00		•	-							
NO         Methyl ethyl acetate         N/A         N/A         0.00										
NO         Methyl Ethyl Ketoxime         N/A         N/A         0.00 <td></td> <td>- · · · · ·</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		- · · · · ·								
NO         Hethyl Methacryla         N/A         N/A         0.00										
NO         Methyl-2-Pyrrolidone         N/A         N/A         0.00										
NO         Methyl-n-mayl Retone         N/A         N/A         N/A         0.00		•								
NO         Mineral Spirits         N/A         N/A         0.00		• •								
NO         Mineral Spirits         N/A         N/A         0.00										
NO         Monomer, free         N/A         N/A         0.00										
NO         Naphtha         N/A         N/A         0.00		· ·	-							
NO         Naphtha         N/A         N/A         0.00			-							
NO         Nitric Acid         N/A         N/A         0.00		-								
NO         Nitrobenzene         N/A         N/A         0.00										
NO         Nitromethane         N/A         N/A         0.00										
NO         Nitropropane         N/A         N/A         0.00										
NO         Octanes         N/A         N/A         0.00										
NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00<		• •								
NO         Petroleum Bther         N/A         N/A         0.00										
NO         Phenols         N/A         N/A         0.00		· •								
#O         Phosphoric Acid         N/A         N/A         0.00										
NO         Phthalate Anhydride         N/A         N/A         0.00         0.00         0.00         0.00         0.00%         0.00%         0.00           NO         Polychlorinated Biphenyls         N/A         N/A         0.00         0.00         0.00         0.00         0.00%         0.00%         0.00           NO         Polyisocyanate         N/A         N/A         0.00         0.00         0.00         0.00%         0.00%         0.00										
NO Polychlorinated Biphenyls N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00 NO Polyisocyanate N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00										
NO Polyisocyanate N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00		•								
NO 1945 THE TOTAL OUT OF THE TAX TOTAL OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OF THE TOTAL OUT OUT OF THE TOTAL OUT OUT OUT OUT OUT OUT OUT OUT OUT OUT	NO	Polyvinyl Chloride	N/A	N/A	0.00	0.00	0.00	0.00		

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

BPA CODES:

LOCATION: TOLEDO APD,

CONTRACTOR'S CODE: WPS-32171

EPA I.D.#: OHD-005041843

D005 D006 D007

D008 N/A N/A N/A N/A DUPONT CODE: WOT-03R STATE: N/A

NAME OF WASTE: WASTE PIGMENT DUST, MIXED

		non-listed ituents present	BPA WASTE	EPA WASTE CODE	Wstwtrs co		All other	-		
					ning spent WASTE	solvents STD	solvent w WASTB	astes STD 		
N	_==== )	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	) n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
M	)	Propyl Gly M-methyl R-Acetate	N/A	N/A	-0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Propyl Glycol M-methyl Bther	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
M	)	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	1,1,2	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
. N	) p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
		-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	)	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
M	)	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
N	)	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
W	)	Water	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

WASTE CHARACTERIZATION FORM (WCF) E.I.DUPONT DENEMOURS & CO. DATE: October 19, 1990 "'GE 1 OF 1 CONTRACTOR'S CODE: OW-0714 LOCATION: TOLEDO APD. DUPONT CODE: WOT-50C OHD-005041843 EPA I.D.# : RPA CODES : 60000002 6018 6035 F003 F005 STATE: N/A Wastewater, Corrossive II.NAME OF WASTE: III. COMPOSITION: E.EXPOSURE LINITS C.ONE TIME OR D. CONCENTRATION RANGE MAJOR UPPER LOWER COMPONENTS TYPICAL ANALYSIS +ACGIH ++OSHA 10.00% 10.00% 5.00% 0.1 ppm 0.1 ppm Caustic . 2. n/a 0.00% 0.00% 0.00% · n/a none 0.00% 0.00% 0.00% n/a n/a 3. n/a 0.50% 0.50% 1.00% 100 ppm 100 ppm Various Solvents, see attached 2.00% 2.00% 4.00% 5. Polymer Solids none none 87.50% 87.50% 90.00% Water none none B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPM) DOES THE WASTE CONTAIN: Mg/L 0.00 \*Br 0.00 Co 0.00 Pb 0.00 Ag 0.00 SULFIDES: AMT: N/A Sb 0.00 0.00 CYANIDES: AMT: N/A 0.00. Cd 0.00 Cu Mn 0.00 Sr NO As 0.00 0.00 NO AMT: N/A 0.00 Ce 0.00 \*F 0.00 \$\$ · PCB'S: Вa AMT: 0.00 \*Cl 0.29 \*I 0.00 Ni 0.00 Tl 0.00 PHENOLICS: YRS Ве 0.00 Cr 0.00 Pe 0.00 0.00 ANT: N/A **≯N** 0.00 Ś'n INSEC'CIDES: NO Βi ‡P Salts: 0.00 0.00 Zn 0.00 PESTICIDES: NO AMT: N/A Soluble 0.00. WO OTHER: AMT:n/a 0.00 HERBICIDES: AMT: N/A none RODEN'CIDES: NO AMT: N/A · SHOW TEST METHOD USED> EPTOX/TCLP: TOT METALS: DIOXINS: NO AMT: N/A YES IV. PHYS.STATE @ 25\*C (ENTER): LIQUID LISTED SOLVENTS: AMT: 0.21% HALOGENS >1000Mg/L: \*IS THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED? NO NO AMT: 0.29 MULTI - PHASED? VOL % OF EACH PHASE: 0.00% SOLID 100.00% LIQUID \*CAN THE WASTE BE PUMPED? YES POURED?YES %FREE FLOWING LIQUID LAYER: 100.00% VOLUME \*PRESSURE OF CONTAINER: N/A % SEPARATE PHASE WATER: 0 ESTIMATED SPEC. GRAV: 1.00 +/- 0.10 ٧. SHIPPING CONTAINERS: AMT:5000 gals. BULK: TW MC CODE: 304 MTRL OF APPROX WGHT CONTAINER PER CHINR LABEL USED TYPE SIZE CONSTRUCTION DOT SPEC DRUMS: 17H.17E 55G STEEL 17H.17E 425 N/A N/A N/A N/A N/A OTHER SIZE: N/A N/A VI. PROPERTIES: BTU/LB: CORROSIVE? YES FLASH POINT(CC): >240F DIRTY 5 -COLOR: Ph: 12.8 ODOR: NO n/a OSHA CARCINOGEN? NO 0.00% ASH CONTENT %: TOXIC ?(EXPLAIN) NO ERR REACTIVE? n/a PYROPHORIC ? NO RADIOACTIVE? NO SHOCK SENSITIVE? NO EXPLOSIVE?NO ETIOLOGICAL? NO OTHER? (EXPLAIN) D.O.T. SHIPPING INFORMATION VII. D.O.T.SHIPPING NAME: RQ, WASTE CORROSIVE LIQUID, NOS, UN1760 DOP1 DOO2 DOIS 6035 F003 F005 D.O.T. HAZARD CLASSIFICATION: FLAMMABLE + CORROSIVE D.O.T. PLACARD: U.N.NO.:UN1760 FLA MM. D.O.T. LABEL: N.A.NO.:n/a CLAMM. VIII. VOLUME: ANNUAL: THIS REQUEST: N/A PER SHIPMENT: 5000 gals. 5000 gals. REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS) NOTE #1: NOTE #2: n/a

PREPARED EY:

A.PARCHOMENKO

NOTE #3:

NOTE #4:

n/a

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Disposal Site & Address): DuPont Chambers Works \* XXXX XXXXXX Rd. \* Deepwater, NJ 08023 \* (609)299-5000 EPA ID.NO.: NJD 002385573

MANIFEST NUMBER: \_\_\_\_NAME OF WASTE: Wastewater, Corrossive BPA CODES: DOOL DOOR DOLS DOLS FOOD FOOT

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)

CONTRACTOR'S-CODE:

OW-0714

DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-50C OHIO EPA CODE:

N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261)!

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_NATIONAL CAPACITY VARIANCE OR \_\_\_ CASE-BY-CASE EXTENSION!

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

IS THIS WASTE A WASTEWATER ?: YES

IDEN		CODE	E EPA WASTE CODE	Wstwtrs c		All oth	er spent	spent				
CABL	APPLI CC's & F001-F00	5 Spent So	lvents	WASTÉ	t solvents STD	WASTE	STD	Constituent Name		Conc'r	el(Mg/L) Treatment Reg.LevStandard	Mark All Applicable
		3001	F003	17.83	0.050	0.0	0.590	Arsenic	NA	. 0	500 <b>N</b> one	NO
	•	8104	L-002			. 0.0		Cadmium	. •	Č		
YES	n-Butyl alcohol		F003	7.44		0.0		Chromium(CrVI)	• • •	C		. NO
	Carbon disulfide	N/A	N/A	0.00		0.0		Cyanide		N/A	1000	NO.
	Carbon tetrachloride		N/A	0.00		0.0	0.960	Lead Mercury		0	•	NO
	Chlordane	N/A	N/A	0.00		0.0	0.030	Mercury	NA	C	20 None	NO
МО	Chlorobenzene	N/A	N/A	0.00		0.0	0.050	Nickel		C	134 None	NO
	Chloroform	N/A	N/A	0.00		0.0		Selenium		C	100	NO
NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0		Thallium		C	130 None	NO
NO	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO
NO	2,4-D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's		3E-07	>0.99% Incinr'tn	Но
NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO
NO	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated org	anic com	pounds.		
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.020					
NO	Ethoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin					
NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053					
NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Heptachlor (& its hydr	oxN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachloro-1,3-butadie	neN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
		Pool	Foos	689.00	5.000	0.0						
NO	Lindane	N/A	N/A	0.00	0.000	0.0						
YES	Methanol	B001	F003	349.00	0.250	0.0	0.750					

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\_Date:\_\_\_\_

Disposal Site & Address): DuPont Chambers Works \* XXXX XXXXXX Rd. \* Deepwater, NJ 08023 \* (609)299-5000 EPA ID.NO.: NJD 002385573 MANIFEST NAME OF WASTE: NUMBER: Wastewater, Corrossive EPA CODES Door DOOR DOIR DOSS FOOS FOOS FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S CODE : OW-0714 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-50C OHIO EPA CODE: N/A N/A NO Methoxychlor N/A 0.00 0.000 10.000 Waste Code Description 4. (Mg/L) NO Methyl ethyl ketone N/A N/A 48.70 0.050 0.0 0.750 or Treatment Subcategory Reg.Lev. YES Methyl isobutyl ketone Dooiooxfoo3 26.80 0.050 0.0 0.330 NO Methylene chloride N/A 0.00 0.200 N/A 0.0 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT YES NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.960 D001: 0.0 Low TOC Liq. (<10 wt% TOC) <10% 268.42(a)DEACT NO Nitrobenzene N/A N/A 0.00 0.650 0.0 0.125 D001: Hi TOC Liq.(>10 wt% TOC) 268.42(a)RORGS >10% YES 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.000 D001: 0.0 n/a 268.42(A)FSUBS YES NO Pentachlorophenol N/A N/A 0.00 0.000 0.0 0.000 De01: n/a 268.42(A)INCIN YES NO Pyridine N/A N/A 1.120 0.00 0.0 0.330 D002: Corr, all subcat's & CA list n/a 268.42(a)DEACT YES NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive n/a 268.42(a)DEACT NO F005 YES Toluene 100 G 391.00 1.120 0.0 0.330 D004: Arsenic (As) 5 268.41,3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.0 0.500 DOOS: Barium (Ba) 100 268.41,3(a) NÓ NO 2,4,5-TP (Silvex) N/A N/A 0.00 0.000 1.000 D006: 0.0 Cadmium (Cd) 1 268.41,3(a) NO NO 1,1,2-T-chloro-1,2,2-t-fN/A N/A 0.00 0.062 0.0 0.091 D007: Chromium (Cr) 5 268.41.3(a) 'MO NO 1,1,1-Trichloroethane N/K N/A 0.00 0.030 0.0 7.600 D008: Lead batteries n/a 268.41,3(a) NO NO 1,1,2-Trichloroethane N/A N/A· 0.00 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41,3(a) NO NO Trichloroethylene N/A N/A 0.00 0.062 0.0 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41.3(a) VARIENO O Trichlorofluoromethane N/A N/A 0.00 0.050 0.0 0.960 D009: Low Nonwstwtr(<260ppm Hg) 0.2 268.41,3(a)VARIENO 2,4,5-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMBRCNO .. 0 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41,3(a) NO NO Vinyl chloride N/A N/A 0.00 0.000 0.0 0.000 D011: Silver (Ag) 5 268.41,3(a) NO YES Xylene FOOS 520.00 0.050 **BOO** 0.0 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory:\_\_ 

Signature of Generators Representative:

FIRE 1 of 3

LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

EPA CODES: 1001 DOO2 DOIS DOSS FOOS FOOS

CONTRACTOR'S CODE : OW-0714
DUPONT CODE : WOT-50C

STATE : N/A

II. NAME OF WASTE: Wastewater, Corrossive

	r identified Cituents present	EPA WAST CODE	E EPA WASTE CODE	Conc Wstwtrs co ning spent WASTE	solvents STD	All other solvent wa	-	Level(Mg/L) Conc'n.Reg.Lev.	
NO	Acetic Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Acrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Acrylonitrilre	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	-
NO	Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Aluminum	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ammonia.	N/A	N/A	0.00	0.00	. 0.00	0.00	0.00% 0.00	
NO	Amyl Acetate .	N/A	* N/A	0.00	0.00	0.00	0.00	0.00% 0.00	•
NO p-	Benzoquinone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	-
YBS n-	Butyl acetate	Dool	Clido3	297.00	0.00	0.00	0.00	0.00% 0.00	
<b>N</b> O	Butyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	•
NO	Butyl Aldehyde, Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO.	Butyl Benzyl Phthalate	N/A .	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO ·	Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	•
t-	Butyl Peroxy	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO.	Calcium	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	CRESOLS	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO 2,4-	D	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	D-ethyl Gly M-butyl E-Acetate	e N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
Ю	D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diacetone Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibasic esters	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO ortho	o-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
· NO	Diisobutyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO n,n-	Dimethyl dodecylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ester Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
.NO 2-	Ethoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

. 7:77 2 of 3

LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

EPA CODES: Dool DOO2 DOIS DOSS FOOS FOOS

CONTRACTOR'S CODE : OW-0714
DUPONT CODE : WOT-50C

STATE: N/A

II. NAME OF WASTE: Wastewater, Corrossive

Other non-listed		WASTE EPA WAS		entration	. • .				
constituents presen	t co	DE CODE	Watwirs co		All othe	-			
			ning spent WASTE	solvents STD	solvent WASTE	wastes STD			
	=======================================		MADIE	210		.910		======	· .
NO Ethyl Acrylat	e N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Ethyl Gly M-b	utyl E-Acetate N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Bthyl Gly M-b	utyl Ether N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Ethyl Gly M-e	thyl E-Acetate N/A	N/A	6.60	0.00	0.00	0.00	0.00%	0.00	
YES Ethylene Glyc		N/A	21.50	0.00	- 0.00	0.00	0.00%	0.00	
NO Ethylene Glyc	ol N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Ethylhexyl Al	cohol N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Formaldehyde	N/A	N/A	4.44	0.00	0.00	0.00	0.00%	0.00	
NO Furfuryl Alco	hol N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Glycol Ethers		N/A	353.00	. 0.00	0.00	0.00	0.00%	0.00	
YES Heptane	NI		739.00	0.00	00,0	0.00	0.00%		
NO Hexane	N/A	N/Å	0.00	0.00	0.00	0.00	0.00%	0.00	•
NO Hexylene Glyc	ol N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Hydrocarbon S	olvent N/A	N/A	435.00	0.00	0.00	0.00	0.00%	0.00	
Isobutyl Acet	ate N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Isopropyl Alc	ohol	N/A	46.80	0.00	0.00	0.00	0.00%	0.00	
NO Lithium Hydro	xide Monohydrate N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methacrylic A	cid N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methane Sulfo	nic Acid N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl Acryla	te N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl ethyl	acetate N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl Ethyl	Ketoxime N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl Methac	ryla N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl-2-Pyrr	olidone N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Methyl-n-Amyl	Ketone N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Mineral Spiri	ts MIA	N/A	893.00	0.00	0.00	0.00	0.00%	0.00	
NO Mineral Spiri	ts N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Monomer, free	N/A	N/A	0.37	0.00	0.00	0.00	0.00%	0.00	
YES Naphtha	Na	N/A	76.60	0.00	0.00	0.00	0.00%	0.00	
NO Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Nitric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Octyl Phenol	Polyeth Alc N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Petroleum Eth	er N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Phenols		N/A	4.46	0.00	0.00	0.00	0.00%	0.00	
Phosphoric Ac	id N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
Phthalate Anh		N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Polychlorinat		N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Polyisocyanat		N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES Polyvinyl Chl		N/A	0.41	0.00	0.00	0.00	0.00%	0.00	

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

LOCATION: TOLEDO APD,
EPA I.D.#: OHD-005041843

LOCATION : EPA I.D.#:	TOLEDO APD, OHD-005041843			CONTRACTOR'S CODE: DUPONT CODE:	OW-0714 WOT-50C
	Door D002 So Wastewater, Corrossi	ne 18 pojz taaj	Foot	STATE :	N/A
					•

const	ituents present	CODE	CODE				-		
				MASTE	SIV	MASTE	510		
 )	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
) n-					0.00	0.00	0.00	0.00%	0.00
)	= 3	N/A	N/A		0.00	0.00		0.00%	0.00
)				0.00	0.00	0.00	0.00	0.00%	0.00
)	Propylene carbonate	N/A		0.00	0.00	. 0.00	0.00		0.00
)	Propylene Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
) ·	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
) ·	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
1,1,2	,Tetrachloroethane	Ñ/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
2,4,5	-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	Water	N/A	N/A	875000	0.00	0.00	0.00	1.75%	0.00
	const  =====  O n-  O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	On- Propylamine Propyl Gly M-methyl E-Acetate Propyl Glycol M-methyl Ether Propylene carbonate Propylene Oxide Propylene Glycol Silica Silica Silicon Styrene Monomer Sulfuric Acid O1,1,1,Tetrachloroethane O1,1,2,Tetrachloroethane O2,3,4,Tetrachloroethane D4,4,5-TP (Silvex) Tri (2-hydroxyethyl) amine Triethylamine Triethylamine Triethylamine Triethylamine Turpentine Vanadium Vinyl Acetate Monomer Vinyl Alcohol	constituents present  CODE	constituents present  CODE  CODE  Propyl Alcohol  Propylamine  Propyl Gly M-methyl E-Acetate N/A  Propyl Glycol M-methyl Ether  Propylene carbonate  Propylene Oxide  Propylene Oxide  Propylene Glycol  Propylene Glycol  N/A  Silica  N/A  Silica  N/A  Silica  N/A  N/A  Silica  N/A  N/A  Silica  N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  Column N/A  N/A  N/A  Column N/A  N/A  N/A  Column N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A	constituents present  CODE  CODE  Nstwtrs coning spent WASTE	CODE CODE Wstwtrs containing spent solvents  WASTE STD	CODE	CODE   CODE   Network   Solvents   Solvent   CODE   CODE   Wasters contained by the	

III.				ii neac	CION KII	i soiaci	un		C.ONE		E OR NALYSIS		CONCENTRATION PBR	N RANGE LOWER		JRE LIMITS H ++OSHA
1.	p-Be	nzoquir	ione					<del></del> .			10.00%	10	.00%	5.00%	0.1 ppm	0.1 ppm
2.	Prop	ylene (	Carbonate	٠.		_		٠			79.70%	. 79	.70%	84.68%	none -	none -
3.	Prop	ylene (	)xide								0.30%	Ō	.30%	0.32%	20 ppm	20 ppm
4.	Vari	ous So	vents, se	e atta	ched						10.00%	10	.00%	10.00%	100 ppm	100 ppm
5.	Poly	mer Sol	ids						2.		0.00%	0	.00%	0.00%	none	none
6.											0.00%	0	.00%	0.00%	none	none
В.	TABLE	OF ALL	COMPONENT	'S INCL	UDING MA	JORS LIS	TED ABO	VB (IN E	PPN)			DOES THE WAST	E CONTAIN:			Mg/L
Sb	)	0.00	*Br	0.00	Co	0.00	Pb	0.00	Åg		0.00	SULFIDES:	NO		AMT:	_
As		0.00	Cd	0.00		0.00	Mn	0.00	. Sr		0.00	CYANIDES:	NO		AMT:	
Ва		0.00	Сe	0.00	*P	0.00	Hg	0.00	<b>\$</b> S		0.00	PCB'S:	NO		AMT:	
Be		0.00	*Cl	0.00		0.00	Ni	0.00	Tl		0.00	PHENOLICS:	NO .		AMT:	0.00%
Bi		0.00	Cr	0.00		0.00	*N	0:00	Śn	2.7	0.00	INSEC'CIDES:	MO		AMT:	
	luble	Salts		0.00		****	≠P	0.00	Zn		0.00	PESTICIDES:	NO		AMT:	
	HER:		none		AMT:n/a		Se	0.00			0.00	HERBICIDES:	NO		. AMT:	
• •	11014				. • .			••••				RODEN'CIDES:	NO.		AMT:	
. 511	OW TEST	METHOR	). USED> .		EPTOX/T	CLP .	TOT	METALS				DIOXINS:	NO.	•		N/A
2			25*C (ENTI		LIQUID						LISTE	D SOLVENTS:	YES		AMT:	
			OUSTING I			ATMEDS A	DE ODEN	IRN 9	NO		RALOGENS	•	NO		AMT:	0.00
	MULTI -			m/RUIM)	II OONI	UTURNED L	וומ זט נופו			each i	PHASE:		.00% SOLID			LIQUID
	UANT WILL		יווער חמונר אווער חמיני	פחסו	VDC	DOLLBONS	una anu				TIMUU:		A TON BOTTO		100.00	1 BIGOID

XFREE FLOWING LIQUID LAYER: CAN THE WASTE BE PUMPED? YES POURED?YES 100.00% VOLUME

\*PRESSURE OF CONTAINER: N/A \* SEPARATE PHASE WATER: BSTIMATED SPEC. GRAV: 1.00 +/- 0.10

V. SHIPPING CONTAINERS:

> BULK: n/a AMT:n/a MC CODE:n/a MTRL OF APPROX WGHT

SIZE CONSTRUCTION DOT SPEC PER CHTNR LABEL USED TYPE STEEL 17H,17E DRUMS: 17H,17E 55G 425 N/A OTHER SIZE: N/A N/A N/A N/A N/A N/A PROPERTIES:

VI.

BTU/LB: 4000 FLASH POINT(CC): <100F CORROSIVE? NO

COLOR: PALE/YELL Ph: 9 ODOR: YES Pungent/Irritating

OSHA CARCINOGEN? YES ASH CONTENT %: 0.00%

Strong Oxidants can cause Reactions

TOXIC ?(EXPLAIN) YES ERR REACTIVE? YES

PYROPHORIC ? NO RADIOACTIVE? NO

**EXPLOSIVE?NO** ETIOLOGICAL? NO SHOCK SENSITIVE? NO

OTHER? (EXPLAIN) p-Benzoquinone has been listed as an EXPERIMENTAL CARCINOGEN!

D.O.T. SHIPPING INFORMATION VII.

D.O.T.SHIPPING NAME: RQ, WASTE FLAMMABLE LIQUID, POISONOUS UN1992 DO01 D002 D003

D.O.T. HAZARD CLASSIFICATION: FLAMMABLE LIQUID

FLAMMABLE U.N.NO.:UN1992 D.O.T. PLACARD:

D.O.T. LABEL: FLAMMABLE LIQUID & POISONOUS N.A.NO.:n/a

VOLUME: VIII. ANNUAL: 500 gals THIS REQUEST: N/A PER SHIPMENT: 10 DRS.

REMARKS: (TREATHENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)

MSDS's for ingredients attached NOTE #1: NOTE #2: SIDE DOOR INCINERATION ONLY!

CANNOT BE LANDFILLED!

NOTE #3: NOTE #4: n/a

> PREPARED BY: A.PARCHOMENKO

DATE :October 19, 1990

CONTAINER

Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171

EPA ID.NO.: OHD 048415665

MANIFEST NUMBER: \_\_\_\_\_NAME OF WASTE:

Resin Reaction Kill Solution

EPA CODES: DO01

D002 D003 年の3

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)

CONTRACTOR'S CODE:

DUPONT EPA I.D.#: OHD-005041843

DUPONT WASTE CODE: WOT-21R

OHIO BPA CODE :

WPS-31560 N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND NEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS ! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_ CASE-BY-CASE EXTENSION !

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

#### IS THIS WASTE A WASTEWATER ?: NO

IDENT	'IFY	SOLVENTS PRESENT	EPA WA	CODE	Wstwtrs c		All other	-	CALIFORNIA LIST	ED CO	nstit					•
ALL A		TCC's & F001-F005	Spent		ning spen WASTE	t solvents STD	solvent WASTE	wastes STD	Constituent Name		, i e de la			(Mg/L) Treatment Reg.LevStandard		Mark All Applicable
NO	Aceton	e	N/A	N/A	0.00	0.050	0.0	0.590	Arsenic		 Na		0	500 None		NO
NO	Benzen		N/A	N/A	0.00	0.070	0.0	- 3.700	Cadmium		. :		0.	100		NO .
NO	n-1	Butyl alcohol	N/A	N/A	0.00	5.000	0.0	5.000	Chromium(CrVI)	٠.	٠.		0	500	• •	NO :
NO	Carbon	disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide			N/A		1000		NO
	Carbon	tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead				0	500		MO
	Chlord	ane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury		NA		0	20 None		NO
NO	Chloro	benzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel				0	134 None		NO
NO	Chloro	form	N/A	N/A	0.00	0.000	0.0	0.000	Selenium				0	100		NO
NO	Cresol	s,o,m,p(cresylic :	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium				0	130 None		NO
NO	Cycloh	exanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's			N/A		50 Incinr'tn		NO
NO	2,4-	D	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC'				0	>0.99% Incinr'tn		NO
NO	1,2-	Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's			N/A		>1000mgIncinr'tn		NO
NO	1,4-	Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated or	ganic	comp	ounds.		-		
NC	1,2-	Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000								
NO	1,1-1	Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000								
NO	2,4-1	Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000								
NO	Endrin		N/A	N/A	0.00	0.000	0.0	0.020								
NO	Ethoxy	ethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin								
NO	Ethyl a	acetate	N/A	N/A	0.00	0.050	0.0	0.750								
NO	Ethyl 1	benzene	N/A	N/A	0.00	0.050	0.0	0.053								
NO	Ethyl e	ether	N/A	N/A	0.00	0.050	0.0	0.750								
NO	Heptacl	hlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000								
NO	Hexach.	loro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000								
NO	Hexach.	lorobenzene	N/A	N/A	0.00	0.000	0.0	0.000								
NO	Hexach.	loroethane	N/A	N/A	0.00	0.000	0.0	0.000								
NO	Isobuta	anol	N/A	N/A	0.00	5.000	0.0	5.000								
	Lindan		N/A	N/A	0.00	0.000	0.0	0.400								
	Methan		N/A	N/A	0.00	0.250	0.0	0.750								

Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 MANIFEST NUMBER: NAME OF WASTE: Resin Reaction Kill SolutionEPA CODESDOO1 D002 D003 Foo3 FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S CODE: WPS-31560 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-21R OHIO EPA CODE : N/A NO Methoxychlor N/A. N/A 0.00 0.000 0.0 10.000 Waste Code Description &, (Mg/L) NO Methyl ethyl ketone N/A N/A 0.00 0.050 0.0 0.750 or Treatment Subcategory Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.00 0.330 0.050 0.0 NO Methylene chloride N/A N/A 0.00 0.200 0.0 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT NO NO Nethylene chloride(PharmN/A N/A 0.00 0.440 0.960 D001: Low TOC Liq. (<10 wt% TOC) <10% 0.0 268.42(a)DEACT NO NO Nitrobenzene N/A N/A 0.00 0.650 0.0 0.125 D001: Hi TOC Liq.(>10 wt% TOC) >10% 268.42(a)RORGS YES NO 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.000 D001: 0.0 268.42(A)FSUBS NO Pentachlorophenol N/A N/A 0.00 0.000 0.0 0.000 D001: n/a 268.42(A)INCIN NO NO Pyridine. N/A N/A 0.00 1.120 0.0 0.330 D002: Corr.all subcat's & CA list n/a 268.42(a)DEACT MO NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive n/a 268.42(a)DEACT YES NO Toluene N/A N/A 0.00 1.120 0.0 0.330 D004: Arsenic (As) 5 268.41.3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.0 0.500 D005: Barium (Ba) 100 268.41,3(a) NO NO 2,4,5-TP (Silvex) N/A N/A 0.00 0.000 0.0 1.000 D006: Cadmium (Cd) 1 268.41,3(a) MO NO 1,1,2-T-chloro-1,2,2-t-fN/A N/A 0.00 0.062 0.091 D007: 0.0 Chromium (Cr) 5 268.41.3(a) NO 1,1,1-Trichloroethane N/A N/A-0.00 0.030 7.600 D008: 0.0 Lead batteries n/a 268.41,3(a) NO NO 1,1,2-Trichloroethane N/A N/A 0.00 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41.3(a) NO. NO Trichloroethylene N/A N/A 0.00 0.062 0.0 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41.3(a)VARIENO O Trichlorofluoromethane N/A 0.00 0.050 N/A 0.0 0.960 D009: Low Nonwstwtr(<260ppm Hg) 0.2 268.41,3(a)VARIENO 2,4,5-Trichlorophenol N/A N/A 0.00 0.000 Hi Nonwstwtr(>=260ppm Hg) 0.0 0.000 D009: 0.2 268.41,3(a) RMERCNO NO 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41,3(a) NO NO Vinyl chloride N/A N/A 0.00 0.000 0.0 0.000 D011: Silver (Ag) 5 268.41,3(a) NO YES Xylene D001 F003 0.00 0.050 20000. 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory: Signature of Generators Representative: Date:

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

. "E 1 of 3

LOCATION: TOLEDO APD,

CONTRACTOR'S CODE: WPS-31560

DUPONT CODE: WOT-21R

STATE : N/A

EPA I.D.#:	OHD-005041843	
EPA CODES:	D001 D002	D003 F003
II. NAME OF WASTE:	Resin Reaction Kill	Solution

Other	identified	EPA WASTE	EPA WASTE	Conc	entration (m	g/l)				
const	ituents present	CODE	CODE	Wstwtrs co	ntai-	All other s	pent			
				ning spent		solvent was		Level(		
				WASTE	STD	WASTE S	TD	Conc'n.R	eg.Lev.	
NO		W/A	======= N/A	0.00	0.00	0.00	0.00	0.00%		Ξ.
NO NO	Acetic Anhydride Acrylic Acid	N/A N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Acrylonitrilre	N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Aluminum	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ammonia	N/A	N/A	0.00	0.00	. 0.00	0.00	0.00%		
. NO	Amyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YESP-	Benzoquinone	N/A	N/A	0.00	0.00	100000.	0.00	0.00%	0.00	
NO P	Butoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO n-	Butyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	and the second of the contract of	٠. :
NO	Butyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butyl Aldehyde, Oxide	N/A	N/A	0.00-	0.00	0.00	0.00	0.00%		
NO :	Butyl Benzyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		•
0 t-	Butyl Peroxy	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
.0	Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NC	Calcium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	CRESOLS	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO 2,4-	D	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	D-ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Diacetone Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Dibasic esters	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
	-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diisobutyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO n,n-	Dimethyl dodecylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Ester Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO O	Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO 2-	Ethoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
	Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
	Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.90	0.00	0.00%	0.00	

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OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

n: TE 2 of 3

LOCATION: TOLEDO APD,

EPA I.D.‡: OHD-005041843

EPA CODES:

D001 D002

D003

12003

CONTRACTOR'S CODE : WPS-31560

DUPONT CODE: WOT-21R STATE: N/A

II. NAME OF WASTE: Resin Reaction Kill Solution

	ther non-listed onstituents present	EPA WASTI CODE	E EPA WASTE CODE	Wstwtrs com	solvents STD	mg/l)	All other solvent wa	-			~~~~~	
NO	Ethyl Acrylate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Ethyl Gly M-butyl E-Acetate	N/A	N/A	0:00	0.00		0.00	0.00	0.00%	0.00		
NO	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Ethyl Gly M-ethyl E-Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Ethylene Glycol	N/A	N/A	0.00	0.00		. 0.00	0.00	0.00%	0.00		
NO	Ethylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Formaldehyde	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	٠.	
NO	Glycerin	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Glycol Ethers	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Heptane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Hexane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Hexylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
0	Hydrocarbon Solvent	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	Isobutyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Isophorone	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Isopropyl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Lithium Hydroxide Monohydrate		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methacrylic Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NC	Methyl Acrylate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methyl Methacryla	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Methyl-n-Amyl Ketone	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Mineral Spirits	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Mineral Spirits	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Monomer, free	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Naphtha	N/A	N/A	0.00	0.00		0.00	0.00	0.00%			
NO.	Naphtha	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Nitric Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Nitrobenzene	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Nitromethane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Nitropropane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Octanes	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Petroleum Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Phenols	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	Phosphoric Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	Phthalate Anhydride	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Polyisocyanate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
NO	Polyvinyl Chloride	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

- -- 3 of 3

LOCATION: TOLEDO APD,

WASTE CHARACTERIZATION FORM (WCF)

OHD-005041843 EPA I.D.#:

EPA CODES:

D001

D002

D003

NAME OF WASTE: Resin Reaction Kill Solution

Foo3

CONTRACTOR'S CODE : WPS-31560

DUPONT CODE: WOT-21R

STATE: N/A

		non-listed ituents present	EPA WASTE CODE	EPA WASTE CODE	Conc Wstwtrs co ning spent WASTE			All other solvent w	•		
	=====			========			======	=======			
NO		Propyl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	
	n-	Propylamine	N/A	N/A	0.00	0.00		0.00	0.00		0.00
NO		Propyl Gly M-methyl B-Acetate		N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Propyl Glycol M-methyl Ether		N/A	0.00	0.00		0.00	0.00		0.00
AB2		Propylene carbonate	N/A	D001	0.00	0.00		7 0000		0.00%	
YES		Propylene Oxide	N/A	D001	0.00	0.00		3 CACA D	- 0.00	0.00%	0.00
NO		Propylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Silica	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Silicon	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Styrene Monomer	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Sulfuric Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO	1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO	1,1,2	,Tetrachloroethane	N/A	N/A	0.00	0.00		0.00	0.00		0.00
NO	2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
	p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
	2,4,5	-TP (Silvex)	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00		0.00	0.00		0.00
NO		Triethanol Amine	N/A	N/A	0.00	0.00		0.00	0.00		0.00
NO		Triethylamine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Triethylamine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Turpentine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Vanadium	N/A	N/A	0.00	0.00		0.00	0.00		0.00
NO		Vinyl Acetate Monomer	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO		Vinyl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00
NO NO		Water	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00

PACE 1 OF 1

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LOCATION: EPA I.D.# : TOLEDO APD,

OHD-005041843

CONTRACTOR'S CODE: WPS-31613

DUPONT CODE: WOT-20R STATE: N/A

EPA CODES : D003

Partially decomposed initiator in water

II. NAME OF WASTE: COMPOSITION:

A.	MAJOR								TIME OF		D.				URE LIMITS
	COMPONENTS							TYPIC	AL ANALY	212	Ļ	IPPER	LOWER	+ACG1	H ++OSHA
1.	2,2'-Azobis	(2,4-dimet	hylpei	ntanenit	rile)					1.00%	<del></del> -	1.00%	0.50%	n/a	10mg/M3
2.	n/a									0.00%		0.00%	0.00%	n/a	n/a ·
3.	n/a									0.00%		0.00%	0.00%	n/a	n/a
4.	n/a									0.00%		0.00%	0.00%	n/a	n/a
5.	n/a									0.00%		0.00%	0.00%	n/a	n/a
6.	Water									99.00%	g	9.00%	99.50%	none	none
В. 1	TABLE OF ALL O	COMPONENTS	INCL	JDING MAJ	JORS LIST	'ED ABOV	E (IN P	PM)			DOES THE WAS	STE CONTAIN:			Mg/L
Sb	0.00	*Br	0.00	Co	0.00	Pb	0.00	Ag		0.00	SULFIDES:	NO		AMT:	N/A
As	0.00	Cd .	0.00	Cu	0.00	Mn, .	0.00	Sr		0.001	CYANIDES:	. NO		AMT:	N/A
Ba	0.00	Ce	0.00	‡₽	0.00	Ħg	0.00	<b>\$</b> \$		0.00	PCB'S:	NO		AHT:	N/A
Ве	0.00	*Cl	0.00	<b>*</b> I	0.00	Ni	0.00	Tl		0.00	PHENOLICS:	NO		AMT:	0.00%
Bi	0.00	Cr	0.00	Рe	0.00	*N	0.00	Sn	•• •	0.00	INSEC'CIDES:	NO		AMT:	N/A
Sol	uble Salts:	;	0.00			*P	0.00	Zn		0.00	PESTICIDES:	NO		AMT:	N/A
OTH	ER: r	none		AMT:n/a		Se	0.00	Zr		0.00	HERBICIDES:	NO		AMT:	N/A
				•							RODEN'CIDES:	NO		AMT:	N/A
SHO	W TEST METHOD	USED>		EPTOX/TO	CLP:	TOT.	METALS:				DIOXINS:	NO		AHT:	N/A
IV. P	HYS.STATE 0 25	s*c (enter	<b>)</b> :	LIQUID						LISTE	D SOLVENTS:	NO		AMT:	0.00%
*[	S THERE A DU	ISTING HA	ZARD 1	F CONTA	AINERS AF	B OPENE	D ?	NO	HA	LOGENS	>1000Mg/L:	NO		AMT:	0.00
‡₩(	ULTI - PHASED?	? NC					VOL X	OF B	ACH PHAS	E:		0.00% SOLID		100.00	% LIQUID
*C/	AN THE WASTE	BE PUMPE	D?	YES	POURED?Y	ES X	PREE PL	OWING	LIQUID	LAYER:	10	0.00% VOLUME			
*P]	ressure of	CONTAINER	:	N/A			% SE	PARATI	E PHASE	WATER:	0	ESTIMA	TED SPEC. GF	LAV : 1.00 +/	- 0.10

V. SHIPPING CONTAINERS:

BULK:	n/a	AMT:n/a	MC CODE:n/a
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	com: n/a	•	nn1 . 11/ a		ac constitt s	L						
					MTRL OF				APPROX WGHT		CONTAINER	
	TYPE		SIZE		CONSTRUCTION	DOT	SPEC		PER CHTNR		LABEL USED	
	DRUMS:	17H,17E	55G		STEEL	17H	,17E		425		N/A	
	OTHER SIZE:	N/A	N/A		N/A	N/A			N/A		N/A	
VI.	PR	OPERTIES:										
FLA	SH POINT(CC):	>240F			BTU/LB:	0				CORROSIVE?	NO	
	COLOR:	CLEAR	Ph:	5 -	9		ODOR:	NO	n/a			

OSHA CARCINOGEN? NO ASH CONTENT %: 0.00%

ERR REACTIVE? YES 0

PYROPHORIC ? NO

RADIOACTIVE? SHOCK SENSITIVE? NO EXPLOSIVE?NO ETIOLOGICAL? NO

OTHER? (EXPLAIN) "Vazo" is reactive W/oxidizers; decomposes >95F. VII. D.O.T. SHIPPING INFORMATION

D.O.T.SHIPPING NAME: HAZARDOUS WASTE, LIQUID, N.O.S., ORM-E, NA9189 D003

D.O.T. HAZARD CLASSIFICATION:

D.O.T. PLACARD: none U.N.NO.:n/a D.O.T. LABEL: none N.A.NO.: NA9189

VIII. VOLUME:

TOXIC ?(EXPLAIN) NO

ANNUAL: 5000 gals THIS REQUEST: N/A PER SHIPMENT: 5000 gals

REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)

NOTE #1: MSDS's for ingredients attached

NOTE #2: n/a NOTE #3: n/a NOTE #4: n/a

PREPARED BY:

A. PARCHOMENKO

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DATE:October 19, 1990

isposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665

MANIFEST NUMBER: NAME OF WASTE: Partially decomposed initiator in water EPA CODES: DOO3

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)

CONTRACTOR'S CODE: WPS-31613

OHIO EPA CODE :

N/A

\_\_\_ 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.BPA REGULATIONS (40 CFR PART 261)!

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_ CASE-BY-CASE EXTENSION!

DUPONT WASTE CODE: WOT-20R

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

#### IS THIS WASTE A WASTEWATER ?: YES

DUPONT EPA I.D.#: OHD-005041843

IDE	NTIFY	SOLVENTS PRESENT	EPA WA	CODE	Wstwtrs c		All other	er spent	CALIFORNIA LISTE	D CONSTITU			
	APPLI	maat - e maat maar						wastes	Constituent		Leve	l(Mg/L) Treatment	Mark All
CAE	LE	TCC's & F001-F005	Spent :	oolvents	WASTE	STD	MASIR	SID .	Name		Concin	Reg.LevStandard	Applicable
N	O Aceton	e	N/A	N/A	0.00	0.050	0.0	0.590	Arsenic	NA	0	500 None	NO
N	O Benzen	e	N/A	N/A	0.00	0.070	0.0	3.700	Cadmium		- 0	100	NO
N	0 n-	Butyl alcohol	N/A	N/A	0.00	5.000	0.0	5.000	Chromium(CrVI)		. 0	500	NO
N	O Carbon	disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000	NO
Č.	Carbon	tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead		0	500	NO
۸.	Chlord	ane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA	0	20 None	NO
N	O Chloro	benzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel		0	134 None	NO
N	O Chloro	form	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0	100	NO
8	O Cresol	s,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium		0	130 None	NO
Ŋ	O Cycloh	exanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO
N	0 2,4-	D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's		0	>0.99% Incinr'tn	NO
ł.	0 1,2-	Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO
N	0 1,4-	Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated org	anic compo	ounds.		
F.	0 1,2-	Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
N	0 1,1-	Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000					
N	0 2,4-	Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000					
N	O Endrin	l	N/A	N/A	0.00	0.000	0.0	0.020					
N	O Ethoxy	ethanol	N/A	N/A	0.00	Inci/Bic	0.0	Incin					
N	O Ethyl	acetate	N/A	N/A	0.00	0.050	0.0	0.750					
3	O Ethyl	benzene	N/A	N/A	0.00	0.050	0.0	0.053					
N	O Ethyl	ether	N/A	N/A	0.00	0.050	0.0	0.750					
N	O Heptac	hlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000					
N	O Hexach	loro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000					
Ņ	O Hexach	lorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
N	O Hexach	loroethane	N/A	N/A	0.00	0.000	0.0	0.000					
Ŋ	O Isobut	anol	N/A	N/A	0.00	5.000	0.0	5.000					
N	O Lindan	e	N/A	N/A	0.00	0.000	0.0	0.400					
N	0 Methan	ol	N/A	N/A	0.00	0.250	0.0	0.750					

LAND DISPOSAL RESTRICTION NOTICE - PAGE 2 OF 2

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Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 NAME OF WASTE: Partially decomposed initiatEPA CODESDO03 MANIFEST NUMBER: FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S CODE: WPS-31613 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-20R OHIO EPA CODE : N/A NO Methoxychlor N/A N/A 0.00 0.000 10.000 Waste Code Description &. (Mg/L) N/A 0.050 0.750 or Treatment Subcategory NO Methyl ethyl ketone N/A 0.00 0.0 Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.00 0.050 0.0 0.330 0.00 0.200 0.0 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT YES NO Methylene chloride N/A N/A NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.0 0.960 D001: Low TOC Liq.(<10 wt% TOC) <10% 268.42(a)DEACT NO Nitrobenzene N/A N/A 0.00 0.650 0.0 0.125 D001: Hi TOC Lig. (>10 wt% TOC) >10% 268.42(a)RORGS NO NO 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.0 0.000 D001: n/a 268.42(A)FSUBS NO 0.00 0.000 0.000 D001: n/a 268.42(A)INCIN NO Pentachlorophenol N/A N/A 0.0 Ю 1.120 0.330 D002: Corr, all súbcat's & CA list n/a 268.42(a)DEACT NO Pyridine N/A N/A 0.00 0.0 0.050 D003: Reactive n/a 268.42(a)DBACT YBS NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 NO Toluene N/A N/A 0.00 1.120 0.0 0.330 D004: Arsenic (As) 5 268.41,3(a) VARIENO 0.00 0.500 D005: Barium (Ba) 100 268.41.3(a) NO Toxaphene N/A N/A 0.000 0.0 NO NO 2,4,5-TP (Silvex) N/A 0.00 0.000 1.000 D006: Cadmium (Cd) 1 268.41,3(a) NO N/A 0.0 5 268.41.3(a) NO. NO 1.1.2-T-chloro-1.2.2-t-fN/A N/A 0.00 0.062 0.0 0.091 D007: Chromium (Cr) NO 1,1,1-Trichloroethane N/A 0.00 0.030 0.0 7.600 D008: Lead batteries n/a 268.41,3(a) NO N/A NO NO 1,1,2-Trichloroethane N/A N/A 0.00 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41.3(a) 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41,3(a)VARIENO NO Trichloroethylene N/A N/A 0.00 0.062 0.0 ` Trichlorofluoromethane N/A N/A 0.00 0.050 0.0 0.960 D009: Low Nonwstwtr(<260ppm Hg) 0.2 268.41,3(a)VARIENO 12,4,5-Trichlorophenol 0.00 0.000 0.0 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMERCNO N/A N/A NO 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41,3(a) NO N/A NO Vinyl chloride N/A 0.00 0.000 0.000 D011: Silver (Ag) 5 268.41,3(a) NO 0.0 NO Xylene N/A N/A 0.00 0.050 0.0 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory: Signature of Generators Representative: \_\_\_\_\_\_ Date: \_\_\_\_\_\_

DATE:October 19, 1990

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LOCATION: TOLEDO APD,

OHD-005041843 EPA I.D.#:

EPA CODES:

D003

II. NAME OF WASTE: Partially decomposed initiator in water

CONTRACTOR'S CODE: WPS-31613

DUPONT CODE: WOT-20R

STATE : N/A

NO   Acetic Abydride	All other spent solvent wastes WASTE STD		Wstwtrs contai- ning spent solvents WASTE STD		RPA WASTE CODE	EPA WASTE EP.		Other identified constituents present		====
NO   Acrylonitrilre	0.0		0.00	0.00	i/a	N/A N/A		Acetic Anhydride		NO
NO	0.0		0.00	0.00	Ī/A	N/A N/.	N,	Acrylic Acid		NO
NO	0.0		0.00	0.00	I/A	N/A N/A	N,	Acrylonitrilre		NO
NO   Aanonia   N/A   N/A   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   NO   NO   Aayl Acetate   N/A   N/A   0.00	0.0		0.00	0.00	√A	N/A N/.	on N,	Aliphatic Hydrocar		NO
NO	0.0		0.00	0.00			N,	Aluminum		NO
NO p-   Benzoquinone	. 0.0		0.00				N,	Ammonia.		NO
NO								Amyl Acetate		
NO n-   Butyl acetate	0.0							Benzoquinone	<b>p</b> -	NO
NO								Butoxyethanol		
NO								• •		
NO   Butyl Aldehyde, Oxide   N/A   N/A   0.00   0								Butyl Acetate		NO
NO   Butyl Benzyl Phthalate   N/A   N/A   0.00										
NO	0.0							Butyl Aldehyde, Ox		
t- Butyl Peroxy	0.0			. 0.00	I/A	N/A N/	ite · N/	Butyl Benzyl Phtha		
Butyl Peroxy Acetate	0.0		0.00	0.00	I/A	N/A N/A	iary N	Butyl Catechol, ter		NO
NO   Butylene Glycol   N/A   N/A   0.00   0.00   0.00   0.00   0.00   0.00   0.00	0.0		0.00	0.00			N,	Butyl Peroxy	t-	
NO   Butyrol Acetone   N/A   N/A   0.00   0.00   0.00   0.00   0.00   0.00   0.00	0.0		0.00	0.00	I/A	N/A N/A	· N/	Butyl Peroxy Aceta		
NO         Calcium         N/A         N/A         0.00	0.0		0.00	0.00	V/A	N/A N/.	N,	Butylene Glycol		NO
NO         CRESOLS         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	N,	Butyrol Acetone		NO
NO         Cyclohexyl Aaine         N/A         N/A         0.00	0.0		0.00	0.00	₹/A	N/A N/.	N,	Calcium		NO
NO 2,4- D         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	N,	CRESOLS		NO
NO         D-ethyl Gly M-butyl B-Acetate N/A         N/A         0.00	0.0		0.00	0.00	V/A	N/A N/.	N,	Cyclohexyl Amine		NO
NO         D-ethyl Gly M-butyl Ether         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	N/	D	2,4-	NO
NO         D-ethyl Gly Methyl Ether         N/A         N/A         0.00<	0.0		0.00	0.00	I/A	N/A N/A	E-Acetate N/	D-ethyl Gly M-buty		NO
NO         Diacetone Alcohol         N/A         N/A         0.00         0.00         0.00         0.00         0.00         0.00           NO         Dibasic esters         N/A         N/A         N/A         0.00         0.00         0.00         0.00         0.00         0.00           NO         Dibutyl Phthalate         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	Ether N/	D-ethyl Gly M-buty		NO
NO         Dibasic esters         N/A         N/A         0.00	0.0		0.00	0.00	ł/A	N/A N/A	ther N/	D-ethyl Gly Methyl		NO
NO         Dibutyl Phthalate         N/A         N/A         0.00	0.0		0.00	0.00	1/A	N/A N/A	N/	Diacetone Alcohol		NO
NO         Dibutyltin Dilaurate         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	N/	Dibasic esters		NO
NO ortho-Dichlorobenzene         N/A         N/A         0.00         0.0	0.0		0.00	0.00	I/A	N/A N/A	N/	Dibutyl Phthalate		NO
NO Diethyl Aminc Ethanci N/A N/A 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.	0.0		0.00	0.00	I/A	N/A N/A	N/	Dibutyltin Dilaura		NO
NO         Diisobutyl Ketone         N/A         N/A         0.00	0.0		0.00	0.00	i/A	N/A N/A			ortho-	NO
NO n,n-         Dimethyl dodecylamine         N/A         N/A         0.00         0.0	0.0		0.00	0.00	I/A	N/A N/A	1 N/	Diethyl Amino Ethan		NO
NO         Dimethyl Hydroxy Ethyl Amine         N/A         N/A         0.00         0	0.0		0.00	0.00	[/A	N/A N/A	N/	Diisobutyl Ketone		NO
NO         Dimethyl         Polysiloxane         N/A         N/A         0.00	0.0		0.00	0.00	I/A	N/A N/A	e N/	Dimethyl dodecylam	n,n-	NO
NO Diphenyl N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00 NO Diphenyl Oxide N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00	0.0		0.00	0.00	I/A	N/A N/A	yl Amine N/	Dimethyl Hydroxy E		NO
NO Diphenyl Oxide N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00	0.0		0.00	0.00	I/A	N/A N/A	e N/	Dimethyl Polysiloxa		NO
	0.0		0.00	0.00	I/A	N/A N/A	N/	Diphenyl		NO
	0.0		0.00	0.00	I/A	N/A N/A	N/	Diphenyl Oxide		NO
	0.0		0.00	0.00	I/A	N/A N/A	N/	Ester Alcohol		NO
NO Ether N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00	0.0		0.00	0.00	I/A	N/A N/A	N/			
NO 2- Ethoxyethanol N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00	0.0		0.00	0.00	I/A	N/A N/A	N/	Ethoxyethanol	2-	NO
Ethyl 3-ethoxy propionata N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00%	0.0		0.00	0.00	I/A	N/A N/A	onata N/	Ethyl 3-ethoxy prop		
O Ethyl Aceto Acetate N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00%	0.0		0.00	0.00	I/A	N/A N/A	N/	Ethyl Aceto Acetate		0

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

n or 2 of 3

LOCATION : TOLEDO APD,

EPA I.D.#: OHD-005041843 EPA CODES:

D003

II. NAME OF WASTE: Partially decomposed initiator in water

CONTRACTOR'S CODE: WPS-31613

DUPONT CODE: WOT-20R

STATE: N/A

NO		cher non-listed Anstituents present	EPA WASTI CODE	E EPA WASTE CODE	Wstwtrs com		All other s solvent was	-			
NO   Ethyl Gly H-butyl Ether   N/A   N/A   0.00	NO	Ethyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00			
MO		Ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00		0.00%	0.00	
NO   Sthylene Glycol   N/A   N/A   0.00		· · · · · · · · · · · · · · · · · · ·	N/A	N/A	0.00	0.00				0.00	
NO   Sthylene Glycol   N/A   N/A   0.00		• •	N/A								
NO   Sthylhexyl Alcohol   N/A   N/A   0.00						0.00					
MO   Formaldehyde   M/A   M/A   0.00   0.0			N/A			0.00					
NO   Furfury  Alcohol   N/A   N/A   0.00		Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO   Glycerin   N/A   N/A   0.00			N/A		0.00		0.00				
NO   Giycol Rithers   N/A   N/A   0.00   0	NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO   Heptane   N/A   N/A   0.00   0	NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	NO	Glycol Ethers	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	NO	Heptane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Hydrocarbon Solvent   N/A	NO	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Isobuty  Acetate	NO	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO		Hydrocarbon Solvent	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO		Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO   Methacrylic Acid   N/A   N/A   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   NO   Methane Sulfonic Acid   N/A   N/A   0.00	NO	Isopropyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO   Methane Sulfonic Acid   N/A   N/A   0.00   0.00   0.00   0.00   0.00   0.00   0.00   0.00   NO   Methyl Acrylate   N/A   N/A   0.00   0	NO	Lithium Hydroxide Monohydrate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO   Methyl Acrylate	NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Methyl ethyl acetate         N/A         N/A         0.00	NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Methyl Ethyl Ketoxime         N/A         N/A         0.00 <td>NO</td> <td><b>Methyl Acrylate</b></td> <td>N/A</td> <td>N/A</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00%</td> <td>0.00</td> <td></td>	NO	<b>Methyl Acrylate</b>	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NC         Methyl Methacryla         N/A         N/A         0.00	NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Methyl-2-Pyrrolidone         N/A         N/A         0.00	NO.	Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Methyl-n-Amyl Ketone         N/A         N/A         N/A         0.00	NO	Methyl Methacryla	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Mineral Spirits         N/A         N/A         0.00         0.00         0.00         0.00         0.00           NO         Mineral Spirits         N/A         N/A         0.00         0.00         0.00         0.00         0.00         0.00           NO         Monomer, free         N/A         N/A         0.00         0.00         0.00         0.00         0.00         0.00         0.00           NO         Naphtha         N/A         N/A         0.00	NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Mineral Spirits         N/A         N/A         0.00	NO	Methyl-n-Amyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Monomer, free         N/A         N/A         0.00	NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Naphtha         N/A         N/A         0.00	CM	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Naphtha         N/A         N/A         0.00	NO	Monomer, free	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Nitric Acid         N/A         N/A         0.00	NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Nitrobenzene         N/A         N/A         0.00	NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Nitromethane         N/A         N/A         0.00	NO		N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Nitropropane         N/A         N/A         0.00	NO	Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Octanes         N/A         N/A         N/A         0.00         0	NO	Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00<	NO	Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Petroleum Ether         N/A         N/A         0.00	NO		N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Phenols         N/A         N/A         N/A         0.00         0	NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Phosphoric Acid         N/A         N/A         0.00		Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO         Phthalate Anhydride         N/A         N/A         0.00	NO	Phenols	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Polychlorinated Biphenyls N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00 NO Polyisocyanate N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00			N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Polyisocyanate N/A N/A 0.00 0.00 0.00 0.00 0.00% 0.00		•	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
			N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO Polyvinyl Chloride N/A N/A 0.00 0.00 0.00 0.00 0.00 0.00 0.00					0.00	0.00	0.00	0.00	0.00%	0.00	
,	NO	Polyvinyl Chloride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	

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WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

LOCATION: TOLEDO APD,

EPA [.D.#: OHD-005041843

EPA CODES:

Other non-listed

D003

NAME OF WASTE: Partially decomposed initiator in water

EPA WASTE EPA WASTE

CONTRACTOR'S CODE : WPS-31613

DUPONT CODE: WOT-20R

STATE: N/A

		• •
Concentration (mg/l)		
wtrs contai-	All other spent	
ø snent salvents	solvent wastes	

		non-itsted	CODE	ELY MYDIE		entraction (mg/1)				
	CODE	constituents present		CODE	Watwirs co		All other	-		
					ning spent		solvent wa			
					WASTE	STD	WASTE	STD		
	====		=======		========				======	
	NO	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO n-	Propylamine	N/A	N/A	0:00	0.00	0.00	0.00	0.00%	0.00
	NO	Propyl Gly M-methyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propyl Glycol M-methyl Bther	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO.	Silicon	N/A.	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 1,1,	i,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 1,1,	2,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 2,3,	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	2,4,	5-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
Y	ES	Water	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

	WASTE CHARACTERIZATION FORM (WCF) E.I.DUPONT DENE	MOURS & CO.				ī	DATE :Octob	ber 19, 1990
(	LOCATION : TOLEDO APD,   EPA I.D.# : OHD-005041843   EPA CODES : D001   D005   D007   D008   D018D035	F003 F005	0	D	CTOR'S CODE : JPONT CODE : 0 STATE :	WOT-17E		
	II.NAME OF WASTE: Paint/Chemical Contaminated Solid Materia	ıls						
		C.ONE TIME OR TYPICAL ANALYS	IS		CONCENTRATIO JPPBR	N RANGE LOWBR		POSURE LIMITS CGIH ++OSHA
	1. Lead / Zinc Chromates		0.03%	_	0.03%	0.03%	0500	g/m3.05mg/m3
	2. Various Unlisted Solid Wastes, see attached		0.90%	1	0.03% 80.90%	73.47%	none	none
	3. Various Paint Constituents, as solids		5.97%	·	5.97%	6.50%	none	none
	4. Various Polymers, as solids		2.50%		2.50%	5.00%	none	
	5. Various Solvents, see attached	:	5.10%		5.10%	10.00%	25PP	4 25PPM
	6. Water		5.50%		5.50%	5.00%	n/a	n/a
	B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN F	•		DOES THE WAS				
	Sb 5.53 *Br 0.03 Co 0.54 Pb 120.08	=	0.00	SULFIDES				ft: N/A
	As 0.02 Cd 53.67 Cu 9.86 Mn 0.11		0.64	CYANIDES		•		CT: N/A
	Ba 1064.33 Ce 0.00 *F 0.72 Hg 0.01 Be 0.00 *Cl 3.25 *I 0.00 Ni 1.80		0.00 0.01	PCB'S PHENOLICS				MT: N/A
. •	Bi 0.51 Cr 0.19 Pe 228.92 *N 0.00		0.36	INSEC'CIDES			e de la Salada de la Carta	fT: 0.000584 fT: N/A
	Soluble Salts: 0.00 #P 0.06		6.29	PESTICIDES:				11. N/A (T: N/A
	OTHER: none AMT:n/a Se 0.00		0.00	HERBICIDES				AT: N/A
				RODEN'CIDES	NO			ft: N/A
	SHOW TEST METHOD USED> BPTOX/TCLP: TOT.METALS:			DIOXINS			AM	M: N/A
	IV. PHYS.STATE € 25*C (ENTER): Liquid			SOLVENTS:	YES			fT: 1.43%
(				>1000Mg/L:	NO			fT: 4.06
		OF EACH PHASE			0.60% SOLID		80.	40% LIQUID
		OWING LIQUID L PARATE PHASE			0.60% VOLUME	AMBN CODA AD	MT . 1 80	. / 0 10
	TRESTORE OF CONTRINER. N/K	JOANN DIANA	WAIDE:	0	EDIIM	ATED SPEC. GR	LAV : 1.20	+/- U.IV
	V. SHIPPING CONTAINERS:							
	BULK: n/a AMT:n/a MC CODE:	n/a						
	MTRL OF			API	PROX WGHT		CONTA	AINER
	TYPE SIZE CONSTRUCTION			Pi	ER CHTHR		LABEL	USED
	DRUMS: 17H,17E 55G STEEL	17H,17E			425		N/A	
	OTHER SIZE: N/A N/A N/A	N/A		N//			N/A	
	VI. PROPERTIES:	10000						
	FLASH POINT(CC): 100F BTU/LB:		OAOB	tron.	0.1	CORROSIVE?	, NO	
	COLOR: Vari/Gray Ph: 5 - 9 OSHA CARCINOGEN? YES ASH CONTEN		ODOR: 0.37%	JR2	Solvents			
	OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO n/a	l .		ACTIVE? NO	n/a			
	PYROPHORIC ? NO		14174	OLIVE: NO	RADIOAC	TIVE? NO		
	SHOCK SENSITIVE? NO EXPLOSIVE?	NO			ETIOLOG			
	OTHER? (EXPLAIN) Not known							
	VII. D.O.T. SHIPPING INFORMATION							
	D.O.T. SHIPPING NAME:RQ, WASTE FLAMMABLE LIQUID, N.O.S.,	D001 D005		D007 I	0008 D018	D035 F0	03 F005	0
	D.O.T. HAZARD CLASSIFICATION: FLANMABLE LIQUID							
	D.O.T. PLACARD: PLAMMABLE LIQUID U.N.NO.:							
	D.O.T. LABEL: PLANMABLE LIQUID N.A.NO.:	n/a						
	VIII. VOLUME: ANNUAL: 200 drs THIS REQUEST:n/a			PER SHIPME	י יויוני י	75 dna		
1	REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/	MSDS)		ron onithi	м.	75 drs		
(	MOTE #1: MSDS's for ingredients attached	11000						
	NOTE #2: n/a							
	NOTE #3: MUST BE INCINERATED, CANNOT BE LANDFILLED!							
	NOTE #4: n/a							
						nneninen nu.	A DAD	MUMBINA

PREPARED BY:

A. PARCHOMENKO

Disposal Site & Address):Environmental Systems Co. (ENSCO INC.) \* \*\*\*\* \*\* \*\*\*\* \*\*\* \*\*\* Little Rock, AK 72205 \* (EPA ID.NO.: ARD XXXXXXXXX

 MANIFEST
 NUMBER:
 NAME OF WASTE:
 Paint/Chemical Contaminated Solid Materials
 EPA CODES:
 D001
 D005D007
 D008
 D018

 PROM LOCATION & ADDRESS:
 TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)
 CONTRACTOR'S CODE:
 122578

DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-17E

OHIO EPA CODE: N/A

\_\_\_ 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS!
THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_\_ CASE-BY-CASE EXTENSION!

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CPR PART 268. IN ACCORDANCE WITH 40 CPR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

#### IS THIS WASTE A WASTEWATER ?: NO

IDE	TRICTED SOLVENTS PRESENT	EPA WASTE CODE	EPA WASTE CODE	Watwirs con		All other		CALIFORNIA LISTED	CONSTITU			
CABI	APPLI LB TCC's & F001-F005	Spent Solve	ents	ning spent WASTE	solvents STD	solvent WASTE	wastes STD	Constituent Name	·		(Mg/L) Treatment Reg.LevStandard	Mark All Applicable
YES		D001	F003	0.00	0.050	121.0		Arsenic	NA	0.4	500 None	NO
AES	Benzene	D001 D018	F005	0.00	0.070	19.2		Hercury	NA	0.09	20 None	NO
YES	n-Butyl alcohol	D001	F003	0.00	5.000	5046.6		Nickel		30.14	134 None	NO
N	Carbon disulfide	N/A	N/A	0.00	1.050	0.0		Thallium		0.2	130 None	NO
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0		Liquids w/PCB's		N/A	50 Incinr'tn	NO
`	Chlordane	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC's		68.03	1000 Incinr'tn	NO
	) Chlorobenzene	N/A	N/A	0.00	0.150	0.0		Solids w/ HOC's		N/A	1000 Incinr'tn	NO
N(	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated organ	ic compo	unds.		
N(	Cresols,o,m,p(cresylic	aD026	D001	0.00	2.820	0.2	0.750					
N	) Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750					
N	2,4-D	N/A	N/A	0.00	0.000	0.0	0.000					
N	1,2-Dichlorobenzene	N/A	N/A	0.00	0.680	0.0	0.125					
N(	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
N	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
N		N/A	N/A	0.00	0.000	0.0	0.000					
N(	· · · · · · · · · · · · · · · · · · ·	N/A	N/A	0.00	0.000	0.0	0.000					
NO	) Endrin	N/A	N/A	0.00	0.000	0.0	0.000					
YES	Ethoxyethanol	D001	F005	0.00	0.000	44.9	0.000					
NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750					
	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053					
	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750					
	Heptachlor (& its hydro	•	N/A	0.00	0.000	0.0	0.000					
	Hexachloro-1,3-butadien		N/A	0.00	0.000	0.0	0.000					
	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
	Hexachloroethene	N/A	N/A	0.00	0.000	0.0	0.000					
	Isobutanol	D001	F005	0.00	5.000	46.8	5.000					
	Lindane	N/A	N/A	0.00	0.000	0.0	0.000					
YES	Methanol	D001	F003	0.00	0.250	2367.2	0.750					
110	HC CHGHU1	D001	1.009	0.00	0.400	4301.4	0.130					

DATE:October 19, 1990

"'CE 1 of 3

. LOCATION : TOLEDO APD,

CONTRACTOR'S CODE: 122578

EPA [.D.#: OHD-005041843 D001 EPA CODES:

D005

D007

D008 D018 D035

F003 F005

DUPONT CODE : WOT-17E STATE : N/A

II. NAME OF WASTE: Paint/Chemical Contaminated Solid Materials

		identified ituents present	EPA WAS	STE EPA WASTE CODE	Conc Wstwtrs co	entration (mg/l	l) All other s	pent		. •
					ning spent WASTE		solvent was	-	Level(Mg Conc'n.Reg	
YES		Acetic Anhydride		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
YES		Acrylic Acid		0 N/A	0.00	0.00	0.00	0.00	0.01% 0	
YES		Acrylonitrilre		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	
NO		Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	
NO		Aluminum Oxide		O N/A	0.00	0.00	0.00	0.00	0.00% 0	
YES		Ammonia		0 N/A	0.00	0.00	- 0.00	0.00	0.00% 0	.00
YES		Amyl Acetate	F003	D001	0.00	0.00	0.61	0.00	0.00% 0	.00
NO	p-	Benzoquinone		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Butoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
YES	u-	Butyl acetate	P003	D001	0.00	0.00	2014.56	0.00	0.20% 0	.00
NO		Butyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
YES		Butyl Acrylate		. O N/A	0.00	0.00	0.00	0.00	0.32% 0	.00
NO		Butyl Aldehyde, Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO	٠.	Butyl Benzyl Phthalate		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
	t-	Butyl Peroxy	F003	D001	0.00	0.00	1.33	0.00	0.00% 0	.00
		Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Calcium		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		CRESOLS	F	ERR N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO	2,4-	D		0 N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		D-ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
YES		D-ethyl Gly M-butyl Ether	P003	D001	0.00	0.00	4.49	0.00	0.00% 0	.00
YES		D-ethyl Gly Methyl Ether	F003	D001	0.00	0.00	0.02	0.00	0.00% 0	.00
YES		Diacetone Alcohol	F003	D001	0.00	0.00	0.01	0.00	0.00% 0	.00
YES		Dibasic esters	F003	D001	0.00	0.00	2.14	0.00	0.00% 0	.00
NO		Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO	ortho	-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
YES		Diethyl Amino Ethanol	F003	D001	0.00	0.00	2.75	0.00	0.00% 0	.00
YES		Diisobutyl Ketone	F003	D001	0.00	0.00	0.35	0.00	0.00% 0	.00
YES	n,n-	Dimethyl dodecylamine	F003	D001	0.00	0.00	0.03	0.00	0.00% 0	.00
YES		Dimethyl Hydroxy Ethyl Amine	F003	D001	0.00	0.00	1.63	0.00	0.00% 0	.00
NO		Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
NO		Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	
YES		Ester Alcohol	F003	D001	0.00	0.00	0.14	0.00	0.00% 0	.00
NO		Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	
М	2-	Bthoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00
		Ethyl 3-ethoxy propionata	F003	D001	0.00	0.00	3.69	0.00	0.00% 0	.00
Νh		Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0	.00

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

nor 2 of 3

EPA CODES:

LOCATION: TOLEDO APD, EPA I.D. :

OHD-005041843

D001

D008 D018 D035 F003 F005 CONTRACTOR'S CODE: 122578 DUPONT CODE: WOT-17E

STATE: N/A

II. NAME OF WASTE: Paint/Chemical Contaminated Solid Materials

D005

D007

	Other non-listed constituents present		TE EPA WASTE CODE	Concentration (mg/l) Wstwtrs contai- ning spent solvents			All other					
				ning spent	STD STD		solvent w WASTE	astes STD				:
YES	Ethyl Acrylate	======= N/A	N/A	0.00	0.00		0.00	0.00	======	0.00%	0.00	
YES	Ethyl Gly M-butyl B-Acetate	F003	D001	0.00	0.00		34.68	0.00		0.00%		
YBS	Ethyl Gly M-butyl Ether	F003	D001	0.00	0.00		47.43	0.00		0.00%	0.00	
yes	Ethyl Gly M-ethyl E-Acetate	F003	D001	0.00	0.00		4.39	0.00		0.00%	0.00	
YES	Ethylene Glycol	F003	D001	0.00	0.00		14.28	0.00		0.00%	0.00	
YES	Ethylene Glycol	F003	D001	0.00	0.00		145.85	0.00	•	0.01%	0.00	
NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Formaldehyde	F003	-D001	0.00	0.00		30.20	0.00		0.00%	0.00	
YES	Furfuryl Alcohol	F003	D001	0.00	0.00		8.16	0.00		0.00%	0.00	
NO	Glycerin	N/A	N/A	0.00	0.00	•	0.00	0.00			0.00	
YES	Glycol Ethers	F003	D001	0.00	0.00		2394.37	0.00		0.24%	0.00	
YES -	Heptane .	F003	D001.	0.00	0.00		479.40	0.00	•	0.05%		•
YES	Hexane	F003	D001	0.00	0.00	•	5002.55	0.00	•	0.50%	0.00	
NO	Hexylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	•
e.	Hydrocarbon Solvent	D001	D001	0.00	0.00		2951.77	0.00		0.30%	0.00	-
ί.	Isobutyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
YES	Isophorone	F003	D001	0.00	0.00		0.12	0.00		0.00%		
YES	Isopropyl Alcohol	F003	D001	0.00	0.00		434.13	0.00			0.00	
YES	Lithium Hydroxide Monohydrate	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Methacrylic Acid	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Methane Sulfonic Acid	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Methyl Acrylate	N/A	N/A	0.00	0.00		0.00	0.00			0.00	
YES	Methyl ethyl acetate	P003	D001	0.00	0.00		0.09	0.00		0.00%		
YES	Methyl Ethyl Ketoxime	F003	D001	0.00	0.00		14.28	0.00		0.00%	0.00	
YES	Methyl Methacryla	N/A	N/A	0.00	0.00		0.00	0.00		0.78%		
NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Methyl-n-Amyl Ketone	F003	D001	0.00	0.00		189.47	0.00		0.02%	0.00	
YES	Mineral Spirits	F003	D001	0.00	0.00		6050.60	0.00		0.61%		
NO	Mineral Spirits	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
YES	Monomer, free	N/A	N/A	0.00	0.00		0.00	0.00		0.00%	0.00	
YES	Naphtha	F003	D001	0.00	0.00		675.90	0.00		0.07%		
YES	Naphtha	F003	D001	0.00	0.00		508.87	0.00		0.05%		
NO.	Nitric Acid	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
YES	Nitrobenzene	F003	D001	0.00	0.00		0.01	0.00		0.00%		
NO	Nitromethane	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
NO	Nitropropane	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
NO	Octanes	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
NO NO	Petroleum Ether	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
And	Phenols	F003	D001	0.00	0.00		29.80	0.00		0.00%		
	Phosphoric Acid	P003	D001	0.00	0.00		0.23	0.00		0.00%		
i tou	Phthalate Anhydride	N/A	N/A	0.00	0.00		0.00	0.00		0.09%		
NO NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
NO VPC	Polyisocyanate	N/A	N/A	0.00	0.00		0.00	0.00		0.00%		
YES	Polyvinyl Chloride	F003	D001	0.00	0.00		2.77	0.00		0.00%	0.00	

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

D035

DATE: October 19, 1990

-- 3 of 3

LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

CONTRACTOR'S CODE: 122578

EPA CODES:

D001

D008 D018

F003 F005

DUPONT CODE : WOT-17E STATE: N/A 0

D005 D007 NAME OF WASTE: Paint/Chemical Contaminated Solid Materials

	Other non-listed constituents present	EPA WASTE CODE	EPA WASTE CODE	Conc Wstwtrs con ning spent WASTE		) All other solvent w WASTE			
YES	Propyl Alcohol	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO	n- Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Propyl Gly M-methyl E-Acetate	•	D001	0.00	0.00	0.00	0.00	0.01%	0.00
NO	Propyl Glycol K-methyl Ether		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Propylene carbonate	F003	D001	0.00	0.00	. 0.00	0.00	0.00%	0.00
YES	Propylene Glycol	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.04%	0.00
NO	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.25%	0.00
NO	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,1,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,2,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	2,3,4,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	p- Toluene Sulfonic Acid	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
. 1110	2,4,5-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Triethylamine Triethylamine	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Vinyl Alcohol	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Water	N/A	N/A	0.00		35₽ <b>00</b> +	0.00	0.01%	0.00

WASTE CHARACTERIZATION FORM (WCF)	E.I.DUPONT DENEMOURS &	. CO.		DATE	:October 19, 1990
LOCATION: TOLEDO APD,  EPA I.D.#: OHD-005041843  EPA CODES: D001 D005 D007 D008  II.NAME OF WASTE: WASTE WASH SOLVENT  III. COMPOSITION:	D018 D035 F003	F005	CONTRACTOR'S CODE : ( DUPONT CODE : 1 O STATE : I	NOT-16W	· •
A. MAJOR COMPONENTS	C.ONE T TYPICAL	IME OR ANALYSIS	D. CONCENTRATION UPPER	RANGE LOWER	E.EXPOSURE LIMITS +ACGIH ++OSHA
1. Various Pigments 2. n/a 3. n/a 4. Various Solvents, see attached 5. Polymer Solids 6. Water B. TABLE OF ALL COMPONENTS INCLUDING MAJORS	ISTED ABOVE (IN PPW)	6.00% 0.00% 0.00% 87.00% 6.00%	6.00% 0.00% 0.00% 87.00% 6.00% 1.00% DOES THE WASTE CONTAIN:	1.00% 0.00% 0.00% 97.50% 1.00% 0.50%	n/a n/a n/a n/a n/a n/a 25 ppu 25 ppu n/a n/a none none Mg/L
. Sb 5.18 *Br 0.00 Co 0.	-	0.00	SULFIDES: NO		AMT: N/A
As 0.03 Cd 0.20 Cu 3.1		1.30	CYANIDES: NO	•	AMT: N/A
Ba 1189.00 Ce 0.00 *F 0.1	-	0.57	PCB'S: NO	-	AMT: N/A
Be 0.00 *C1 26.67 *I 0.0 Bi 0.57 Cr 32.80 Fe 253.0		0.01 0.40	PHENOLICS: YES INSEC'CIDES: NO	er en en en	AMT: 0.00% AMT: N/A
Soluble Salts: 0.00	*P 0.00 Zn	360.00	PESTICIDES: NO		AMT: N/A
OTHER: none AMT:n/a	Se 0.00 Zr	3.00-	HERBICIDES: NO	•	AMT: N/A
			RODEN'CIDES: NO		ANT: N/A
SHOW TEST METHOD USED> EPTOX/TCLP:	TOT METALS:		DIOXINS: NO		AMT: N/A
TV. PHYS.STATE @ 25*C (ENTER): LIQUID			SOLVENTS: YES		AMT: 13.54%
IS THERE A DUSTING HAZARD IF CONTAINERS			>1000Mg/L: NO		AMT: 27.24
*MULTI - PHASED? NO	VOL % OF EAC	H PHASE.	0.00% SOLID		100.00% LIQUID
					100.00% fireford
*CAN THE WASTE BE PUMPED? YES POUR	RD?YES MARKE PLOWING D	IQUID LAYER:	100.00% VOLUME	PPD CDPC CDAY.	
	RD?YES MARKE PLOWING D		100.00% VOLUME	TED SPEC. GRAV :	
*CAN THE WASTE BE PUMPED? YES POUR *PRESSURE OF CONTAINER: N/A	RD?YES MARKE PLOWING D	IQUID LAYER:	100.00% VOLUME	TED SPEC. GRAV :	
*CAN THE WASTE BE PUMPED? YES POUR *PRESSURE OF CONTAINER: N/A	RD?YES %PREE FLOWING I % SEPARATE	IQUID LAYER:	100.00% VOLUME	TED SPEC. GRAV :	
*CAN THE WASTE BE PUMPED? YES POUR *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gale	RD?YES XPREE PLOWING I % SEPARATE HC CODE: 304 HTRL OF	IQUID LAYER:	100.00% VOLUME 0 ESTIMA*  APPROX WGHT	TED SPEC. GRAV :	
*CAN THE WASTE BE PUMPED? YES POURD *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gale  TYPE SIZE	RD?YES XPREE PLOWING D X SEPARATE  MC CODE: 304  MTRL OF  CONSTRUCTION	IQUID LAYER: PHASE WATER: DOT SPEC	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR	TED SPEC. GRAV :	0.90 +/- 0.15  CONTAINER LABEL USED
*CAN THE WASTE BE PUMPED? YES POURD *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gal: TYPE SIZE DRUMS: 17H,17E 55G	RD?YES XPREE FLOWING D X SEPARATE  MC CODE: 304  MTRL OF  CONSTRUCTION  STEEL	IQUID LAYER: PHASE WATER: DOT SPEC 17H,17E	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425	TED SPEC. GRAV :	0.90 +/- 0.15  CONTAINER LABEL USED N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gal:  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A	RD?YES XPREE FLOWING D X SEPARATE  MC CODE: 304  MTRL OF  CONSTRUCTION  STEEL	IQUID LAYER: PHASE WATER: DOT SPEC	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR	TED SPEC. GRAV :	0.90 +/- 0.15  CONTAINER LABEL USED
*CAN THE WASTE BE PUMPED? YES POUR PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES:	RD?YES XPREE FLOWING I X SEPARATE  MC CODE: 304  MTRL OF  CONSTRUCTION  STEEL  N/A	IQUID LAYER: PHASE WATER: DOT SPEC 17H,17E	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425		0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURD *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F	RD?YES XPREE FLOWING I X SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000	DOT SPEC 17H,17E N/A	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A	TED SPEC. GRAV :  CORROSIVE?	0.90 +/- 0.15  CONTAINER LABEL USED N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F COLOR: Various Ph:	RD?YES XPREE PLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9	DOT SPEC 17H,17E N/A ODOR:	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425		0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURD *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F	RD?YES XPREE FLOWING I X SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents		0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F COLOR: Various Ph: OSHA CARCINOGEN? YES	RD?YES XPREE PLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA  APPROX WGHT PER CNTNR 425 N/A  YES Solvents	CORROSIVE?	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gals  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO	RD?YES XPREE PLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA'  APPROX WGHT PER CNTNR 425 N/A  YES Solvents  ACTIVE? NO n/a	CORROSIVE?	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 gals  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F COLOR: Various Ph: OSHA CARCINOGEN? YES TOXIC ?(EXPLAIN) NO ERR PYROPHORIC ? NO SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known	ADPRES APPRE FLOWING IN SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT %:  EXPLOSIVE?NO	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA'  APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT:	CORROSIVE?	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gals  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPP	ADPYES APPRE PLOWING IN SEPARATE  MC CODE: 304  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LB: 16000  5 - 9  ASH CONTENT %:  EXPLOSIVE?NO	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT* ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gal:  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGHT	AD?YES XPREE FLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION WILD, N.O.S., UN1993	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents  ACTIVE? NO n/a RADIOACT. ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gals  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGHT LIGHT CLASSIFICATION: FLAMMABLE	RD?YES XPREE FLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT* ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gals  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGHT LIG	SD?YES XPREE FLOWING I X SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993 C LIQUID U.N.NO.:UN1993	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT* ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gale  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGOUS. FLAMMABLE  D.O.T. PLACARD: FLAMMABLE  D.O.T. LABEL: PLAMMABLE LIQUID	RD?YES XPREE FLOWING IN SEPARATE  MC CODE: 304 MTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993	DOT SPEC 17H,17E N/A ODOR: 0.32%	100.00% VOLUME 0 ESTIMA*  APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT* ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURD  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gale  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIQUID  D.O.T. HAZARD CLASSIFICATION: FLAMMABLE  D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:	SD?YES XPREE FLOWING I X SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993 C LIQUID U.N.NO.:UN1993	DOT SPEC 17H,17E N/A ODOR: 0.32%	APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT: ETIOLOGIC	CORROSIVE? IVE? NO CAL? NO	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURD  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gale  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIQUID  D.O.T. HAZARD CLASSIFICATION: FLAMMABLE  D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:	ADPYES XPREE FLOWING IN SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993 LIQUID U.N.NO.:UN1993 N.A.NO.:N/A	DOT SPEC 17H,17E N/A ODOR: 0.32%	APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT: ETIOLOGIC	CORROSIVE?  IVE? NO CAL? NO D018 D035	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gals  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGHT LIG	ADPRES XPREE FLOWING IN SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993 IN.A.NO.:N/A  EQUEST:N/A FETY SUGGESTIONS/ MSDS)	DOT SPEC 17H,17E N/A ODOR: 0.32%	APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT: ETIOLOGIC	CORROSIVE?  IVE? NO CAL? NO D018 D035	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO
*CAN THE WASTE BE PUMPED? YES POURL *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 gal:  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Various Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE, FLAMMABLE LIGHT D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. LABEL: PLAMMABLE LIQUID  VIII. VOLUME:  ANNUAL: 5000 gals THIS RI  RENARKS: (TREATMENT OF SPILLS/SI	ADPRES XPREE FLOWING IN SEPARATE  HC CODE: 304 HTRL OF CONSTRUCTION STEEL N/A  BTU/LB: 16000 5 - 9 ASH CONTENT X:  EXPLOSIVE?NO  ING INFORMATION NUID, N.O.S., UN1993 IN.A.NO.:N/A  EQUEST:N/A FETY SUGGESTIONS/ MSDS)	DOT SPEC 17H,17E N/A ODOR: 0.32%	APPROX WGHT PER CNTNR 425 N/A  YES Solvents CACTIVE? NO n/a RADIOACT: ETIOLOGIC	CORROSIVE?  IVE? NO CAL? NO D018 D035	0.90 +/- 0.15  CONTAINER LABEL USED N/A N/A NO

PREPARED BY:

A.PARCHOMENKO

G

NOTE #4:

n/a

. Disposal Site & Address): CWM Resource Recovery/SRR \* XXXX Xxxxxxx Rd. \* West Carrollton, OH XXXXX \* (513)859-6101EPA ID.NO.: OHD XXXXXXXXX

 MANIFEST
 NUMBER:
 \_\_\_NAME OF WASTE:
 WASTE WASH SOLVENT
 EPA CODES:
 D001
 D005D007
 D008
 D018

 FROM LOCATION & ADDRESS:
 TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)
 CONTRACTOR'S CODE:
 COLE05879

 DUPONT EPA I.D. 1:
 OHD-005041843
 DUPONT WASTE CODE:
 WOT-16W
 OHIO EPA CODE:
 N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261)!

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS!
THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_\_ CASE-BY-CASE EXTENSION!

4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

#### IS THIS WASTE A WASTEWATER ?: NO

	REST IDEN	RICTED SOLVENTS PRESENT TIFY	EPÀ WASTE CODE	EPA WASTE CODE	Conc Wstwtrs co	entration ntai-	(mg/l) All other		CALIFORNIA LISTEI	CONSTITU	ENTS PRESI	ENT		
÷	CABL	APPLI E TCC's & F001-F005	Spent Solve	ents	ning spent WASTE	solvents STD	solvent WASTE	wastes STD			Conc'n	l(Mg/L) Treatment Reg.LevStandard		Mark All Applicable
	YES	Acetone	D001	F003-	0.00	0.050		0.590	Arsenic	NA NA	0.03		-	NO
	YES	Benzene	D001 D018	P005	0.00	0.070	2.9	3.700	Cadmium	• '	0.03	100	.•	NO
	YES	n-Butyl alcohol	D001	F003	0.00	5.000	2871.2		Chromium(CrVI)		32.8	500		NO
,	0	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000		NO
		Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead		133	500		NO
	NO	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA	0.01	20 None		NO
	NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel		2	134 None		NO
	NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0	100		NO
	NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium		0.01	130 None		NO
	NO	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn		NO
	NO	2,4-D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's		27.24	>0.99% Incinr'tn		YES
	NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn		NO
	NO	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated orga	anic compo	unds.			
	NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.020						
	NO	Ethoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin						
	NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053						
	NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	YES	Isobutanol	D001	F005	0.00	5.000	26.6	5.000						
	NO	Lindane	N/A	N/A	0.00	0.000	0.0	0.400						
	YES	Methanol	D001	F003	0.00	0.250	1346.8	0.750						

G

Disposal Site & Address): CMM Resource Recovery/SRR \* XXXX Xxxxxxx Rd. \* West Carrollton, OH XXXXX \* (513)859-6101BPA ID.NO.: OHD XXXXXXXXX

MANIFEST NUMBER:  FROM LOCATION & ADDRESS:  DUPONT EPA I.D. #: OHD-0050		1930 Trema			OH 43613	PA CODESDOO1 F003 (Ph.419-478-1211	D005 D007 P005		D035 DR'S CODE : EPA CODE :	F005 COLE05879 N/A
NO Methoxychlor YES Methyl ethyl ketone YES Methyl isobutyl ketone NO Methylene chloride NO Methylene chloride(Pha: NO Nitrobenzene NO 2-Nitropropane NO Pentachlorophenol NO Pyridine NO Tetrachloroethylene YES Toluene NO Toxaphene NO 2,4,5-TP (Silvex) NO 1,1,2-T-chloro-1,2,2-t NO 1,1,1-Trichloroethane NO Trichloroethylene Trichlorofluoromethane NO Trichlorofluoromethane NO 2,4,5-Trichlorophenol NO 2,4,6-Trichlorophenol NO Vinyl chloride YES Xylene	N/A N/A N/A N/A N/A N/A D001 N/A N/A	N/A P005 P003 N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.00 0.00 0.00	0.000 0.050 0.050 0.200 0.440 0.650 Incin/Cho 0.000 1.120 0.079 1.120 0.000 0.000 0.062 0.030 0.030 0.030 0.050 0.000 0.000 0.000	0.0 188.1 103.7 0.0 0.0 0.0 0.0 0.0 0.0 1510.1 0.0 0.0 0.0 0.0 0.0 0.0	0.750 or Treatm 0.330 0.960 D001: 0.960 D001: 0.125 D001: 0.000 D001: 0.000 D001: 0.330 D002: 0.050 D003: 0.330 D004: 0.500 D005: 1.000 D006: 0.991 D007: 7.600 D008: 7.600 D008: 0.091 D009: 0.960 D009: 0.000 D009:	de Description &, ment Subcategory  Wstwtrs(<1.0 wt% Low TOC Liq.(<10 Hi TOC Liq.(>10  Corr,all subcat' Reactive Arsenic (As) Barium (Ba) Cadmium (Cd) Chromium (Cr) Lead batteries Other lead (Pb) Wstwtrs(<1.0 wt% Low Nonwstwtr(<2 Hi Nonwstwtr(>2 Selenium (Se) Silver (Ag)	Reg.1 (TOC & TSS)<1.09 (WX TOC) <10% WX TOC) >10%  n/a n/a s & CA list n/a n/a  (TOC & TSS) 0 (60ppm Hg) 0	268.42(a)DEAC 268.42(a)DEAC 268.42(a)RORG 268.42(A)FSUI 268.42(A)INCI 268.42(a)DEAC	TT NO SS YES SS NO IN MO TT NO TT NO VES NO YES NO YES RIENO RIENO RIENO RIENO RIENO RIENO

The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams.

I believe the above information is true, accurate, and complete.

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CPR 268.32 or RCRA Sec. 3004(d).

I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting

a false certification, including the possibility of a fine or imprisonment.

Name and Title of Signatory:	 	
Signature of Generators Representative:	Date:	

1 of 3

EPA CODES:

.. LOCATION : TOLEDO APD,

OHD-005041843 EPA I.D.#:

D001 D005

D007 D008 D018

D035 F003

F005

DUPONT CODE: WOT-16W
0 STATE: N/A

CONTRACTOR'S CODE: COLE05879

II. NAME OF WASTE: WASTE WASH SOLVENT

	er identified stituents present	EPA WAST	B BPA WASTE CODE	Conc Wstwtrs co	entration ntai-	(mg/l) All other	r spent			
				ning spent WASTE	solvents STD	solvent w	wastes STD	Level( Conc'n.R		
NO NO	Acetic Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Acrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Acrylonitrilre	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Aluminum	N/A	D001	0.00	0.00	1.74	0.00	0.00%		
NO	Ammonia	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Amyl Acetate	N/A	D001	0.00	0.00	1146.12	0.00	0.11%		
NO p-	Benzoquinone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO.	Butoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00		0.00	
NO n-	Butyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Butyl Acetate	N/A	N/A	0.00	0.00	0.00		0.00%		
NO	Butyl Acrylate	N/A	N/A	. 0.00	0.00	0.00	0.00	0.00%		
NO	Butyl Aldehyde, Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		··· ·
NO	Butyl Benzyl Phthalate	N/A	N/A	0.00		0.00	0.00		0.00	
	Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
t-	Butyl Peroxy	N/A	N/A	0.00	0.00	0.00	0.00		0.00	
NO	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Calcium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	CRESOLS	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO 2,4		N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	D-ethyl Gly M-butyl E-Acetate		N/A	0.00	0.00	0.00	0.00	0.00%		
NO	D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diacetone Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dibasic esters	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO ortl	no-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diisobutyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO n,n		N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ester Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
2-	Ethoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
	Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
	•							•		

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

2 of 3

EPA I.D.:

EPA CODES:

1. LOCATION: TOLEDO APD,

OHD-005041843

D001

D007

D008 D018

D035 F003

F005

DUPONT CODE: WOT-16W

CONTRACTOR'S CODE : COLE05879

STATE: N/A

II. NAME OF WASTE: WASTE WASH SOLVENT

	ner non-listed nstituents present	EPA WASTE CODE	B EPA WASTE CODE	Wstwtrs con ning spent		All other				
NO	Ethyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Bthyl Gly M-butyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES	Ethyl Gly M-ethyl E-Acetate	N/A	D001	0.00	0.00	25.56	0.00	0.00%	0.00	
YES	Ethylene Glycol	N/A	D001	0.00	0.00	82.98	0.00	0.01%	0.00	
NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00.	0.00	0.00	0.00%	0.00	
YES · ·	Formaldehyde	·N/A	D001-	0.00	0.00	17.16	0.00	0.00%	0.00	
NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
. YES	Glycol Bthers	N/A	D001	0.00	0.00	1362.24	0.00	0.14%	0.00	
YES	Heptane	N/A	D001	0.00	0.00	2846.10	0.00	0.28%	0.00	
NO ·	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	•
	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
	Hydrocarbon Solvent	N/A	D001	0.00	0.00	1680.12	0.00	0.17%	0.00	
NO	Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Isopropyl Alcohol	N/A	D001	0.00	0.00	246.96	0.00	0.02%		
NO	Lithium Hydroxide Monohydrate		N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl Methacryla	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl-n-Amyl Retone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Mineral Spirits	N/A	D001	0.00	0.00	3447.60	0.00	0.34%		
NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
YES	Monomer, free	N/A	D001	0.00	0.00	1.44	0.00	0.00%	0.00	
YES	Naphtha	N/A	D001	0.00	0.00	295.96	0.00	0.03%	0.00	
NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Nitric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Nitrobenzene	N/A	D001	0.00	0.00	0.06	0.00	0.00%	0.00	
NO	Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
	Phenols	N/A	D001	0.00	0.00	0.18	0.00	0.00%	0.00	
NO	Phosphoric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Phthalate Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Polyisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
YES	Polyvinyl Chloride	N/A	D001	0.00	0.00	1.56	0.00	0.00%		

WASTE CHARACTERIZATION FORM (WCF) E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

. LOCATION : TOLEDO APD,

CONTRACTOR'S CODE: COLE05879

EPA I.D.:

OHD-005041843

DUPONT CODE: WOT-16W

EPA CODES:

D001 D005

F005

STATE: N/A

D008 D018 D007

D035 F003

NAME OF WASTE: WASTE WASH SOLVENT

	Other non-listed constituents present	EPA WASTE	EPA WASTE CODE	Conce Wstwtrs con ning spent WASTE		All other solvent w	•		
NO	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	n- Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propyl Gly M-methyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propyl Glycol M-methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Propylene Glycol	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,1,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,2,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	2,3,4,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
, · · · · · · · · · · · · · · · · · · ·	p- Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	2,4,5-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Triethylamine	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Vanadium	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Vinyl Alcohol	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES	Water	N/A	N/A	0.00	0.00	10 pop,	0.00	0.06%	0.00

¥ (	ASTE CHARACTERIZATION FORM (WCP)	E.I.D	upont den	ENOURS &	co.			DAT	B:Octobe	r 19, 1990
١	LOCATION: TOLEDO API EPA I.D.#: OHD-005041						CTOR'S CODE : UPONT CODE :			
	EPA CODES : NONE,	0 0 0	0	~	0		STATE:	N/A		
	I.NAME OF WASTE: WASTE ASBI	SSTOS INSULATION	0	0	0					•
1	A. MAJOR COMPONENTS			C.ONE T	IME OR ANALYSIS		CONCENTRATI UPPER	ON RANGE LOWER		SURE LIMITS IH ++OSHA
-	1. Asbestos Insulation				100.00%	1	00.00%	100.00%	1 ppm	1 ppm
	2. n/a	•			0.00%		0.00%	0.00%	n/a	
	3. n/a				0.00%		0.00%	0.00%	n/a	n/a
	4. Various Solvents, see atta	ached		٠,	0.00%		0.00%	0.00%	n/a	n/a
	<ol> <li>Polymer Solids</li> <li>Water</li> </ol>				0.00% 0.00%		0.00% 0.00%	0.00% 0.00%	n/a n/a	n/a n/a
	B. TABLE OF ALL COMPONENTS INC	LUDING WAJORS LISTED A	BOVE (IN 1	PPN)	U.UUA	DORS THE WA	STE CONTAIN:	V. VV.	11/ &	n/a Mg/L
	Sb 0.00 *Br 0.00		0.00		0.00	SULFIDES			AMT	: N/A
	As 0.00 Cd 0.00	) Cu 0.00 Mn	0.00		0.00	CYANIDES	: NO		AMT	: N/A
	Ba 0.00 Ce 0.00	) *F 0.00 Hg	0.00		0.00	PCB'S				: N/A
		) *I0.00 Ni		Tl	0.00	PHENOLICS				. 0.00%
	Bi 0.00 Cr 0.00		0.00		0.00	INSEC'CIDES				: N/A
	Soluble Salts: 0.00	) *P AMT:n/a Se	0.00 0.00	Zn Zr	0.00 0.00	PESTICIDES HERBICIDES				: N/A : N/A
	orner none	Anti-u/a se	V.00	41	0.00	RODEN'CIDES				. M/A
	SHOW TEST NETHOD USED>	EPTOX/TCLP: To	OT METALS	:		DIOXINS				: N/A
, 1	" PHYS.STATE @ 25*C (ENTER):	SOLID				SOLVENTS:	NO		THA	: 0.00%
(	IS THERE A DUSTING HAZARD	IF CONTAINERS ARE OP		YBS		>1000Mg/L:	NO		TMA	
	*MULTI - PHASED? NO	NO BOURDE SHO		% OF EAC		i	00.00% SOLID		0.0	0% LIQUID
	*CAN THE WASTE BE PUMPED?	NO POURED?NO			IQUID LAYER:	0	0.00% VOLUME		, o ./	A 15
	*PRESSURE OF CONTAINER:	N/A	A 3	CPARAIL .	PHASE WATER:	U	E011	MATED SPEC. GRAV	i : .3 tj-	0.13
V	. SHIPPING CO	NTAINERS:								
	BULK: DUMPSTER	AMT:130 yds.	NC CODE	:n/a						
			MTRL OF				PROX WGHT		CONTAI	
	TYPE		NSTRUCTIO		DOT SPEC	F	ER CHTHR		LABEL	USED
	DRUMS: 17H,17E OTHER SIZE: N/A		TEEL /a .		17H,17B N/A	N/	225		N/A N/A	
Ţ	VI. PROPERTIES:	n/n n	/A ·		n/ n	N/	А		n/ n	
·	FLASH POINT(CC): >240		BTU/LB	: 0				CORROSIVE?	NO	
	COLOR: WHITE	Ph: 5 -	9		ODOR:	NO	n/a			
	SHA CARCINOGEN? NO		ash conte	NT %:	0.00%					
1	OXIC ?(EXPLAIN) NO ERI	R			RI	RACTIVE? NO	-	american No.		
r	PYROPHORIC ? NO		DADE VG LIM	2110				CTIVE? NO		
	HOCK SENSITIVE? NO PTHER? (EXPLAIN) Not known		EXPLOSIVE	: NU			RITOPO	GICAL? NO		
	II.	D.O.T. SHIPPING INFO	RMATION							
	D.O.T.SHIPPING NAME:RQ, WASTE			n/a	NONE, Asbest*	<b>*</b> *	0	0 0	0	0 0
	D.O.T. HAZARD CLASSIFICATION:	ORM-C	-							
	D.O.T. PLACARD: none		U.N.NO.							
	D.O.T. LABEL: none		N.A.NO.	:n/a						
. 1	VIII. VOLUME:	MUTC DEMNIDOM. N	/A			DED CULL	<i>ር</i> ግም •	120 -4-		
	NNUAL: 150 yds.	THIS REQUEST:N T OF SPILLS/ SAFETY SU		/ Menel		PER SHIP	IDN1:	130 yds.		
		for Asbestos handling		ן ווטטטון						
	_	t an BPA/RCRA hazardou								
	NOTE #3: n/a									
	NOTE #4: n/a							D000-000		MANAGE A
								DDFDADFN DV.	A DADO	บกพรพเก

PREPARED BY:

A.PARCHOMENKO

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.. (Disposal Site & Address): Browning Perris Ind. of Ohio \* 6233 Hagman Rd. \* Brie, MI 43611 \* (419)472-1165

EPA ID.NO.: N/A

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1 OF 2

MANIFEST NUMBER: NAME OF WASTE:

WASTE ASBESTOS INSULATION

EPA CODES: NONE, Asbestos is not an EPA/RCRA hazardous waste

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211)

CONTRACTOR'S CODE :

NONE

DUPONT EPA I.D.#: OHD-005041843

DUPONT WASTE CODE: WOT-15B

OHIO EPA CODE:

N/A

KYCK 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !

- 2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_ CASE-BY-CASE EXTENSION!
- 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

## IS THIS WASTE A WASTEWATER ?: NO

RESTI IDENT	RICTED SOLVENTS PRESENT	BPA WASTE CODE	EPA WASTE	Conc Wstwtrs co	entration ntai-	(mg/l) All oth	er spent	CALIFORNIA LISTE	ED CONST	ITUENTS PE	RESENT	٠	
CABLE			ents	ning spent WASTE	solvents STD	selvent WASTE	wastes STD	Constituent Name	•		evel(Mg/L) Treatment 'n.Reg.LevStandard		All icable
NO	Acetone	N/A	N/A	0.00	0.050	0.0	0.590	Arsenic	NA		0 500 None	NO	
NO	Benzene	N/A	N/A	0.00	0.070	0.0	3.700	Cadmium			0 100	NO	
NO	n-Butyl alcohol	N/A	N/A	0.00	5,000	0.0	5.000	Chromium(CrVI)			0 500	. NO	
. "0	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000	NO	
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead			0 500	NO	
NO	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA		0 20 None	NO	
NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0		Nickel			0 134 None	NO	
NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium			0 100	NO	
NO	Cresols,o,m,p(cresylic		N/A	0.00	2.820	0.0		Thallium			0 130 None	NO	
	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO	
NO	· •	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC's	5	N/A	>0.99% Incinr'tn	NO	
NO	*	N/A	N/A	0.00	0.650	0.0		Solids w/ HOC's		•	0 >1000mgIncinr'tn	NO	
NO		N/A	N/A	0.00	0.000	0.0		*Halogenated org		pounds.	Ü		
NO		N/A	N/A	0.00	0.000	0.0	0.000	•	,	-F ·			
NO	1,1-Dichloroethylene		N/A	0.00	0.000	0.0	0.000						
NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
	Endrin	N/A	N/A	0.00	0.000	0.0	0.020						
	Ethoxyethanol	N/A	N/A		Inci/Bio		Incin						
	Ethyl acetate	N/A	N/A	0.00	0.050	0.0							
	Ethyl benzene	N/A	N/A	0.00	0.050	0.0							
	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750						
	Heptachlor (& its hydro		N/A	0.00	0.000	0.0	0.000						
	Hexachloro-1,3-butadien		N/A	0.00	0.000	0.0	0.000	•					
	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	Isobutanol	N/A	N/A	0.00	5.000	0.0							
	Lindane	N/A	N/A	0.00	0.000	0.0	0.400						
	Methanol	N/A	N/A	0.00	0.250	0.0	0.750						
140	ne enuny1	N/ N	u/ u	V 1 V U	4.690	v.v	0.100						

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Date:

Disposal Site & Address):Browning Ferris Ind. of Ohio \* 6233 Hagman Rd. \* Erie, MI 43611 \* (419)472-1165 BPA ID.NO.: N/A MANIFEST NUMBER: NAME OF WASTE: WASTE ASBESTOS INSULATION EPA CODESNONE, ASD CONTRACTOR'S CODE : FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) NONE DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-15B OHIO RPA CODE : N/A NO Methoxychlor N/A. N/A 0.00 0.000 10.000 Waste Code Description &, 0.0 (Mg/L) NO Methyl ethyl ketone N/A N/A 0.00 0.050 0.0 0.750 or Treatment Subcategory Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.00 0.050 0.0 0.330 NO Methylene chloride N/A N/A 0.00 0.200 0.0 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.960 D001: 0.0 Low TOC Liq. (<10 wt% TOC) <10% 268.42(a)DEACT NO Nitrobenzene N/A N/A 0.00 0.650 0.125 D001: 0.0 Hi TOC Liq.(>10 wt% TOC) >10% 268.42(a) RORGS NO NO 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.0 0.000 D001: n/a 268.42(A)FSUBS NO NO Pentachlorophenol N/A N/A 0.00 0.000 0.000 DOO1: 0.0 n/a 268.42(A) INCIN NO NO Pyridine N/A N/A 0.00 1.120 0.330 D002: 0.0 Corr.all subcat's & CA list n/a 268.42(a)DRACT NO NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive n/a 268.42(a)DEACT NO N/A NO Toluene N/A 0.00 1.120 0.0 ~0.330 D004: Arsenic (As). 5 268:41.3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.500 D005: 0.0 Barium (Ba) 100 268.41,3(a) NO. NO 2.4.5-TP (Silvex) N/A. N/A 0.00 0.000 0.0 1.000 D006: Cadmium (Cd) 1 268.41,3(a) NO NO 1,1,2-T-chloro-1,2,2-t-fN/A N/A Chromium (Cr) 0.00 0.062 0.0 0.091 D007: 5 268.41,3(a) NO NO 1.1.1-Trichloroethane · N/A N/A. 0.00 0.030 0.0 7.600 D008: Lead batteries n/a 268.41,3(a) NO. NO 1,1,2-Trichloroethane N/A N/À 0.00 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41,3(a) NO "O Trichloroethylene N/A N/A 0.00 0.062 0.091 D009: 0.0 Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41,3(a) VARIENO Trichlorofluoromethane N/A N/A 0.960 D009: 0.00 0.050 Low Nonwstwtr(<260ppm Hg) 0.0 0.2 268.41,3(a)VARIENO NO 2,4,5-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMERCNO NO 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41,3(a) NO NO Vinyl chloride N/A N/A 0.00 0.000 0.000 D011: 0.0 Silver (Ag) 5 268.41,3(a) NO NO Xylene N/A N/A 0.00 0.050 0.0 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory:

Signature of Generators Representative:

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

1 of 3

. LOCATION: TOLEDO APD, EPA I.D.‡: OHD-005041843

EPA CODES: NONE, Asb

II. NAME OF WASTE: WASTE ASBESTOS INSULATION

CONTRACTOR'S CODE : NONE
DUPONT CODE : NOT-15B
STATE : N/A

		Other	identified	EPA WASTE	EPA WASTE	Conc	entration	(mg/1)				
		const	ituents present	CODE	CODE	Watwirs con			All other	spent		
						ning spent	solvents		solvent w	astes	Level(Mg/L)	
						WASTE	STD		WASTE	STD	Conc'n.Reg.Lev.	
-	NO		Acetic Anhydride	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Acrylic Acid	N/A	N/A	0,00	0.00		0.00	0.00	0.00% 0.00	
	NO		Acrylonitrilre	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Aluminum Oxide	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Ammonia	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00-	
	NO		Amyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO	<b>p-</b>	Benzoquinone	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
		e Person	Butoxyethanol	N/A	N/A	0.00			0.00	0.00	0.00% 0.00	
	NO		Butyl acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	•
	NO		Butyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Butyl Acrylate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	•.
	NO			N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
:	NO		Butyl Benzyl Phthalate		N/A	0.00	0.00		0.00	0.00	0.00% 0.00	•
	***			N/A	N/A	0.00	0.00	•	0.00	0.00	0.00% 0.00	
		t-	Butyl Peroxy	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	•
	NO	•	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Butylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Butyrol Acetone	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Calcium	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		CRESOLS	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Cyclohexyl Amine	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
		2,4-	D	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO	-,.	D-ethyl Gly M-butyl E-Acetate		N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Diacetone Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Dibasic esters	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Dibutyl Phthalate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Dibutyltin Dilaurate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
		ortho:	-Dichlorobenzene	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO	or tho	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Diisobutyl Ketone	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
		n,n-	Dimethyl dodecylamine	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO	11 , 11	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Dimethyl Polysiloxane	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO NO		Diphenyl	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Diphenyl Oxide	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO NO		Ester Alcohol	N/A N/A	N/A N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO NO		Ether	n/a N/A	n/a N/a	0.00	0.00		0.00	0.00	0.00% 0.00	
		2-	Ethoxyethanol	n/a N/a	n/a N/a	0.00	0.00		0.00	0.00		
		<u>.</u>	•								0.00% 0.00	
	NΟ		Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	
	NO		Ethyl Aceto Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00% 0.00	

E.I.DUPONT DENEMOURS & CO.INC.

~ 2 of 3

. LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

EPA CODES: NONE, Asb

II. NAME OF WASTE: WASTE ASBESTOS INSULATION

DATE: October 19, 1990

CONTRACTOR'S CODE : NONE

DUPONT CODE: WOT-15B

STATE: N/A

	her non-listed nstituents present	EPA WAST! CODE	E EPA WASTE CODE	Conc Wstwtrs co ning spent WASTE		All other solvent w		,	· ·	
NO NO	Ethyl Acrylate	N/A	N/A	0,00	0.00	0.00	0.00	0.00%	0.00	
NO	Ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ethyl Gly M-ethyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Bthylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Bthylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO.	· · · · · · · · · · · · · · · · · · ·	· N/A	N/A	0.00	0.00	0.00	9.00	0.00%		the second second
NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Glycol Ethers	N/A	N/A	. 0.00	0.00	0.00	0.00	0.00%		
NO .	Heptane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
0	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
v	Hydrocarbon Solvent	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isopropyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Lithium Hydroxide Monohydrate		N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Methyl ethyl acetate	N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Methyl Ethyl Ketoxime	n/a N/A		0.00	0.00	0.00	0.00			
NO NO	Methyl Methacryla	n/a N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00% 0.00%		
NO NO	Methyl-2-Pyrrolidone				0.00					
NO NO	• •	N/A	N/A	0.00		0.00	0.00	0.00%		
NO NO	Methyl-n-Amyl Ketone Mineral Spirits	N/A N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	<del>-</del>	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Mineral Spirits Monomer, free	N/A N/A	N/A N/A	0.00 0.00	0.00	0.00 0.00	0.00 0.00	0.00%	0.00	
NO NO	Naphtha	N/A N/A		0.00	0.00		0.00	0.00% 0.00%		
NO	Naphtha	N/A	N/A N/A	0.00	0.00	0.00				
NO NO	Nitric Acid	N/A N/A	n/a N/a	0.00	0.00	0.00 0.00	0.00 0.00	0.00%		
NO NO	Nitrobenzene	n/a N/A	n/a N/a	0.00	0.00	0.00	0.00	0.00% 0.00%		
NO NO	Nitromethane	N/A		0.00	0.00					
NO	Nitropropane	N/A	N/A N/A	0.00	0.00	0.00 0.00	0.00 0.00			
NO	Octanes	N/A	N/A N/A	0.00	0.00	0.00	0.00		0.00	
NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Petroleum Ether	N/A	n/a N/a	0.00	0.00	0.00	0.00	0.00%	0.00	
no n	Phenols	N/A N/A	n/a N/a	0.00	0.00	0.00	0.00		0.00	
.0	Phosphoric Acid	N/A N/A	n/a N/a	0.00	0.00	0.00	0.00			
NO	Phthalate Anhydride	n/a N/A	n/a N/A	0.00	0.00	0.00	0.00	0.00% 0.00%	0.00	
NO NO	Polychlorinated Biphenyls	N/A N/A	n/a N/a	0.00	0.00	0.00	0.00	0.00%		
NO	Polyisocyanate	n/a N/a	n/a N/a	0.00	0.00	0.00	0.00			
NO NO	Polyrisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	

NO

Polyvinyl Chloride

N/A

N/A

0.00

0.00

0.00

0.00

0.00% 0.00

WASTE CHARACTERIZATION FORM (WCF) E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

. 3 of 3

.. LOCATION :

TOLEDO APD,

EPA I.D.#:

OHD-005041843

EPA CODES:

NONE, Asb

NAME OF WASTE: WASTE ASBESTOS INSULATION

CONTRACTOR'S CODE: NONE

DUPONT CODE: WOT-15B

STATE: N/A

	non-listed ituents present	EPA WASTE CODE	EPA WASTE	Conc Wstwtrs con ning spent WASTE		All other solvent w	•		
NO	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propyl Gly M-methyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO	Propyl Glycol M-methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Silica	N/A ·	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO .	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO 1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO 1,1,2	Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO 2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
0 p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
2,4,5	-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	Water	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

LOCATION : TOLBDO APD,   CONTRACTOR'S CODE : WPS-32174	WASTE CHARACTERIZATION FORM (WCF)	E.I.DUPONT DENE	MOURS & CO.			DATE	:October 19, 1990
TABLE   1.0000	•						
LIL MANOR OF MATE   MATOR   PART PAINT LIQUID   PROSE   CORE TIME OR   D. OMESTEATION   BARDE   E.EPSCHEELINITS   COMPANIES   D. OMESTEATION   BARDE   E.EPSCHEELINITS   COMPANIES   D. OMESTEATION   BARDE   E.EPSCHEELINITS   D. O.SCE   D. O.		ו פוחת פחחת	ክብ <b>ን</b> ፍ <b>ም</b> በበን	DOPON			
CAMPA TIME OR   D. COMPONENTION   D. COMPONENTI				)	DIAID . P	ηn	
C.CNR TIME CO	•	1000	v	,			• •
1.	A. MAJOR						
1.	1. Lead / Zinc Chromates other listed nigner	nte	0.3	<u> </u>	<u>)¥</u>	0.10¥	05md/m3 05md/m3
A. National Prignent	•						
4. YAR JOSES SOLVENTS, SER ESTACHED 5. POLYMEN SOLVENTS, SER ESTACHED 5. POLYMEN SOLVENTS, SER ESTACHED 6. WASHE 8. TABLES OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPW) 7. BI 13.00 % 10.00 % 0.0							
5. Polymer Solids							
5. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPW)   DORS THE MASTE CONTAINS:   1.00%   Mg/L			17.0				
Signature   Sign			0.5			1.00%	
ANT : \$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	B. TABLE OF ALL COMPONENTS INCLUDING MAJORS L	ISTED ABOVE (IN PI	PM)	DOES THE WASTE	CONTAIN:		Mg/L
Be	Sb 136.00 *Br 0.00 Co 13.19	Pb 2951.00	Ag 0.0	) SULFIDES:	MO		AMT: N/A
Be   0.00   \$\cupecup   \$\cu					NO	•	AHT: N/A
Bi   12.59   Cr   929.00   F   5626.00   N   0.00   Sn   8.29   INSEC*CIDES: NO		•	<b>*</b> S 0.0	PCB'S:	NO		AMT: N/A
Soluble   Salts   Sa	·				YES		
OTHER   None						-	
SHOW TEST NETHOU USED   SPONTTCLP: TOT.NETALS: DIDXINS: NO		•					
SHOW TEST WETHOD USED	OTHER: none AMT:n/a	Se 0.04	Zr 0.0		•		· ·
PHYS. STATE	OTION BOOK IMPRIANTIATES PROPERTY	mon imerica		· ·			
IS THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED ? NO	· · · · · · · · · · · · · · · · · · ·	IUT METALS:					
#HULTI - PHASED? NO		ADD ODDINGS 1					
**CAN THE							
**************************************							100,00% BIfford
V. SHIPPING CONTAINERS:    BULK: T/W						RD SPEC. GRAV	: 1.10 +/- 0.15
NATE   NATE	·						,
NOTE   SIZE		MC CODE:	304				
Type	military since			APPROX	WGHT		CONTAINER
DRUMS: 174,17E   55G   STEEL   174,17E   425   N/A	TYPE SIZE		DOT SPEC				
OTHER SIZE:							
VI.   PLOWERTIES:   100F   BTU/LB: 16000   CORROSIVE?   NO   N/a   REACTIVE?   NO   CORROSIVE?   NO   CORROSIONAL   NO   CORROSIVE?   NO   CORROSIV	· · · · · · · · · · · · · · · · · · ·						
COLOR:	VI. PROPERTIES:						
SHA CARCINOGEN?   TES	FLASH POINT(CC): 100F	BTU/LB:	16000			CORROSIVE?	NO
TOXIC ? (EXPLAIN) NO BER	COLOR: Various Ph:	5 - 9	0D0	R: YES	Various So	lvents	
PYROPHORIC ? NO	OSHA CARCINOGEN? YES	ASH CONTENT	T %: 3.2	)%			
SHOCK SENSITIVE? NO EXPLOSIVE?NO ETIOLOGICAL? NO OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING INFORMATION  D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE LIQUID, UN1263 D001 *** D005 D007 D008 D018 D035 F003  D.O.T. HAZARD CLASSIFICATION: FLAMMABLE LIQUID  D.O.T. PLACARD: PLAMMABLE UN.NO.:UN1263  D.O.T. LABEL: FLAMMABLE LIQUID N.A.NO.:N/A  VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE \$1: MSDS's for ingredients attached  NOTE \$2: Must be incinerated, CANNOT be landfilled!  NOTE \$3: n/a				REACTIVE? NO	n/a		
OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING INFORMATION  D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE LIQUID, UN1263 D001 *** D005 D007 D008 D018 D035 F003  D.O.T. HAZARD CLASSIFICATION: FLAMMABLE LIQUID  D.O.T. PLACARD: FLAMMABLE UNID N.A.NO.:N/A  VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE \$1: MSDS's for ingredients attached  NOTE \$2: Must be incinerated, CANNOT be landfilled!  NOTE \$3: n/a	DVDADUADIC ? NA				RADIOACTI	VR? NA	
VII. D.O.T. SHIPPING INFORMATION  D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE LIQUID, UN1263 D001 *** D005 D007 D008 D018 D035 F003  D.O.T. HAZARD CLASSIFICATION: FLAMMABLE LIQUID  D.O.T. PLACARD: FLAMMABLE U.N.NO.:UN1263  D.O.T. LABEL: FLAMMABLE LIQUID N.A.NO.:N/A  VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE \$1: MSDS's for ingredients attached  NOTE \$2: Must be incinerated, CANNOT be landfilled!  NOTE \$3: n/a					INIDIOIOII		
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D.O.T. HAZARD CLASSIFICATION: FLAMMABLE LIQUID  D.O.T. PLACARD: FLAMMABLE U.N.NO.:UN1263  D.O.T. LABEL: FLAMMABLE LIQUID N.A.NO.:N/A  VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TRRATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE \$1: MSDS's for ingredients attached  NOTE \$2: Must be incinerated, CANNOT be landfilled!  NOTE \$3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known		NO				
D.O.T. PLACARD: FLAMMABLE U.N.NO.:UN1263 D.O.T. LABBL: FLAMMABLE LIQUID N.A.NO.:N/A VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE \$1: MSDS's for ingredients attached  NOTE \$2: Must be incinerated, CANNOT be landfilled!  NOTE \$3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN	NG INFORMATION	NO		ETIOLOGIC	CAL? NO	
D.O.T. LABBL: FLAMMABLE LIQUID N.A.NO.:N/A  VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE #1: MSDS's for ingredients attached  NOTE #2: Must be incinerated, CANNOT be landfilled!  NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE	NG INFORMATION		*** D005	ETIOLOGIC	CAL? NO	D035 F003
VIII. VOLUME:  ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE #1: MSDS's for ingredients attached  NOTE #2: Must be incinerated, CANNOT be landfilled!  NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE	NG INFORMATION 3 LIQUID, U	UN1263 DOO1	*** D005	ETIOLOGIC	CAL? NO	D035 F003
ANNUAL: N/A THIS REQUEST:N/A PER SHIPMENT: 4500 GALS  REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE #1: MSDS's for ingredients attached  NOTE #2: Must be incinerated, CANNOT be landfilled!  NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T. SHIPPING NAME: RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE	NG INFORMATION 3 LIQUID, 6 LIQUID U.N.NO.:	UN1263 DOO1 UN1263	*** D005	ETIOLOGIC	CAL? NO	D035 F003
REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)  NOTE #1: MSDS's for ingredients attached  NOTE #2: Must be incinerated, CANNOT be landfilled!  NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID	NG INFORMATION 3 LIQUID, 6 LIQUID U.N.NO.:	UN1263 DOO1 UN1263	*** D005	ETIOLOGIC	CAL? NO	D035 F003
NOTE #1: MSDS's for ingredients attached  NOTE #2: Must be incinerated, CANNOT be landfilled!  NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABBL: FLAMMABLE LIQUID VIII. VOLUME:	NG INFORMATION 3 LIQUID, U.N.NO.:	UN1263 DOO1 UN1263		ETIOLOGIC	AL? NO	D035 F003
NOTE #2: Must be incinerated, CANNOT be landfilled! NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T.SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID VIII. VOLUME: ANNUAL: N/A THIS REC	NG INFORMATION 3 LIQUID, NO.:1 U.N.NO.:1 N.A.NO.:3	UN1263 DOO1 UN1263 N/A		ETIOLOGIC	AL? NO	D035 F003
NOTE #3: n/a	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T. SHIPPING NAME: RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABBL: FLAMMABLE LIQUID VIII. VOLUME: ANNUAL: N/A THIS REARMARKS: (TREATMENT OF SPILLS/ SAI	MG INFORMATION 3 LIQUID, ( LIQUID U.N.NO.:1 N.A.NO.:1	UN1263 DOO1 UN1263 N/A		ETIOLOGIC	AL? NO	D035 F003
	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T. SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABBL: FLAMMABLE LIQUID VIII. VOLUME: ANNUAL: N/A THIS REA REMARKS: (TRRATMENT OF SPILLS/ SAN NOTE \$1: MSDS's for ingredients attached	MG INFORMATION 3 LIQUID, INTO THE CONTROL OF THE CO	UN1263 DOO1 UN1263 N/A		ETIOLOGIC	AL? NO	D035 F003
	SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPIN D.O.T. SHIPPING NAME:RQ, WASTE PAINT FLAMMABLE D.O.T. HAZARD CLASSIFICATION: FLAMMABLE D.O.T. PLACARD: FLAMMABLE D.O.T. LABBL: FLAMMABLE LIQUID VIII. VOLUME: ANNUAL: N/A THIS REG REMARKS: (TREATMENT OF SPILLS/ SAI NOTE \$1: MSDS's for ingredients attache NOTE \$2: Must be incinerated, CANNOT be	MG INFORMATION 3 LIQUID, INTO THE CONTROL OF THE CO	UN1263 DOO1 UN1263 N/A		ETIOLOGIC	AL? NO	D035 F003

PREPARED BY:

A.PARCHOMENKO

G

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1 OF 2

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

.(Disposal Site & Address):Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 MANIFEST NUMBER: NAME OF WASTE: D005 D007 WASTE PAINT LIQUID EPA CODES: DOO1 D018 F003 F005 FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S CODE : WPS-32174 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-13R OHIO EPA CODE: N/A

- 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !
- 2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS!
  THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_\_\_NATIONAL CAPACITY VARIANCE OR \_\_\_\_\_ CASE-BY-CASE EXTENSION!
- XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

## IS THIS WASTE A WASTEWATER ?: NO

	RICTED SOLVENTS PRESENT TRIFY	EPA WASTE CODE	EPA WASTE CODE	Cone Wstwtrs co	centration ontai-	(mg/l) All other		CALIFORNIA LISTE	D CONSTITUEN	NTS PRES	BNT		
CABI	_			WASTE	t solvents STD	WASTE	STD	Name			l(Mg/L) Treatment Reg.LevStandard		
YES	Acetone Benzene	D001	P003	0.00		308.9			, NA	0.59		NO	
ABS			F005	0.00	0.070	9.4	3.700	Cadmium		0.59	100	NO	
YES	n-Butyl alcohol	D001	F003	0.00	5.000	12880.7	5.000	Chromium(CrVI)		929	500	YES	
"(	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide.		N/A	1000	NO	
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead		2951	500	YES	-
NO	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA	0.14	20 None	NO /	u.
NC	Chlorobenzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel		44.22	134 None	NO	
NC	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0.04	100	NO	
NC	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium		0.29	130 None	NO	
NO	) Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO	
NC	2,4-D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's		41.7	>0.99% Incinr'tn	YES	
NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO	
NC	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated org	anic compour	nds.			
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
NC	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000						
NC	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
NC	Endrin	N/A	N/A	0.00	0.000	0.0	0.020						
NC	Bthoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin						
NC	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750						
NC	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053						
NC	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750						
NC	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000						
NC	Hexachloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000						
NC	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
NC	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	Isobutanol	D001	F005	0.00	5.000	119.5	5.000						
	Lindane	N/A	N/A	0.00	0.000	0.0	0.400						
YES	Methanol	D001	F003	0.00	0.250	6042.0	0.750						

	Disposal Site & Address)	:Ross Incine	eration Services	, Inc. * 394	Giles Rd. *	Grafton, OH 4	4044 * (216)748-2171 EP	PA ID.NO.: OHD 048415665	(
HAN:	IPEST NUMBER:	NAME OF WAS	STE: WAST	B PAINT LIQUI	[D	EPA CODESDOO1 FOO5	D005 0	D007 D018D035	F003
	M LOCATION & ADDRESS: ONT EPA I.D.‡: OHD-0050		, 1930 Tremainsv DUPO	ille Rd.,Tole WT WASTE CODE				CONTRACTOR'S CODE : OHIO BPA CODE :	WPS-32174 N/A
YES YES NO NO NO NO NO NO NO NO NO NO NO NO NO	Methyl isobutyl ketone O Methylene chloride O Methylene chloride(Phar O Nitrobenzene O 2-Nitropropane O Pentachlorophenol O Pyridine O Tetrachloroethylene Toluene O Toxaphene O 2,4,5-TP (Silvex) O 1,1,2-T-chloro-1,2,2-t- O 1,1,1-Trichloroethane O 1,1,2-Trichloroethane Trichloroethylene Trichlorofluoromethane O 2,4,5-Trichlorophenol O 2,4,6-Trichlorophenol O Vinyl chloride Xylene	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A N/A N/A N/A P003	0.00 0.00 0.00 0.00 0.00 0.03 0.00 0.03 0.00 0.03 0.00 0.03 0.00 0.03 0.00 0.00 0.00 0.00 0.00 0.00	50 844.1 50 465.1 50 0.0 60 0.0 50 0.0 60 0.	0.750 or Tr 0.330 0.960 D001: 0.960 D001: 0.125 D001: 0.000 D001: 0.000 D001: 0.330 D002: 0.050 D003: 0.330 D004: 0.500 D005: 1.000 D006: 0.091 D007: 7.600 D008: 7.600 D008: 0.091 D009: 0.960 D009: 0.000 D010: 0.000 D011: 0.150	Low TOC Liq.(<10 wt% TO Hi TOC Liq.(>10 wt% TO Corr,all subcat's & CA Reactive Arsenic (As) Barium (Ba) Cadmium (Cd) Chromium (Cr) Lead batteries Other lead (Pb) Wstwtrs(<1.0 wt% TOC & Low Nonwstwtr(>260ppm Hi Nonwstwtr(>260ppm Selenium (Se)	C) >10% 268.42(a)RORG  n/a 268.42(A)FSUB: n/a 268.42(A)INCH 1 list n/a 268.42(a)DEAC  n/a 268.42(a)DEAC  5 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 5 268.41,3(a) 5 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a)VAI 1 268.41,3(a)VAI 1 268.41,3(a) VAI 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a) 1 268.41,3(a)	T NO S YES S NO N NO T NO T NO PLENO YES NO YES RIENO RIENO
	of the waste to support	this certif rmation I su	ication so as tubmitted is true	comply with accurate, a	n all applic and complete	able prohibiti . I am aware t	waste through analysis & tons set forth in 40 CFR 26 hat there are significant	8.32 or RCRA Sec. 3004(d)	
	Name and Title of Signa	tory:	****			<del></del>		•	

Signature of Generators Representative: \_\_\_\_\_\_ Date:

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

1 of 3

EPA I.D.#: EPA CODES:

. LOCATION : TOLEDO APD,

OHD-005041843

D005

D007 D018 D035

F003 F005

CONTRACTOR'S CODE: WPS-32174

DUPONT CODE: WOT-13R STATE : N/A

II. NAME OF WASTE: WASTE PAINT LIQUID

D001

	her identified nstituents present	EPA WAST	TE EPA WAST	Wstwtrs c	centration (mg ontai- t solvents STD	All other : solvent wa: WASTE		Level(Mg/L) Conc'n.Reg.Lev.	
NO	Acetic Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Acrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Acrylonitrilre	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Aluminum Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ammonia	N/A	N/A	. 0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Anyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO p-		N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO		N/A		0.00	0.00	0.00	0.00	0.00% 0:00	w e, in
YES n-	• •	N/A	D001	0.00	0.00	5141.82	0.00	0.51% 0.00	•
NO	Butyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO		N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyl Benzyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
t-		N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Calcium	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
MO	CRESOLS	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO 2,	•	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO ,	D-ethyl Gly M-butyl E-Acetate		N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diacetone Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibasic esters	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	tho-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diisobutyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO n,		N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ester Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
1 2-		N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
.0	Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

2 of 3

.. LOCATION : TOLEDO APD,

EPA I.D.: OHD-005041843

EPA CODES:

D001

ERR DOOS

D007 D018 D035 F003 F005

DUPONT CODE : WOT-13R ERR STATE : N/A

CONTRACTOR'S CODE: WPS-32174

II. NAME OF WASTE: WASTE PAINT LIQUID

	Other non-listed constituents present		STE BPA WASTE CODE	Conc Wstwtrs co ning spend WASTE		mg/l) All other solvent wa WASTE	•		
NO	Ethyl Acrylate	1222222 N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	====
NO	Ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES	Ethyl Gly M-ethyl E-Acetate	N/A	D001	0.00	0.00	114.58	0.00	0.01% 0.00	
YES	Ethylene Glycol	N/A	D001	0.00	0.00	372.30	0.00	0.04% 0.00	
NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES .	Formaldehyde	N/A	D001	0.00	0.00	77.01		0.01% 0.00	
NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES	Glycol Ethers	N/A	D001	0.00	0.00	6111.16	0.00	0.61% 0.00	
YBS	Heptane	N/A	D001	.0.00	0.00	12768.19	0.00	1.28% 0.00	
NO	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Hydrocarbon Solvent	N/A	D001	0.00	0.00	6030.24	0.00	0.60% 0.00	
NO	Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES	Isopropyl Alcohol	N/A	D001	0.00	0.00	1108.06	0.00	0.11 <b>x</b> 0.00	
YES	Lithium Hydroxide Monohydrate		D001	0.00	0.00	949.96	0.00	0.09% 0.00	
NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Methyl Ethyl Ketoxime	n/a N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Methyl Methacryla	N/A N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Methyl-n-Amyl Ketone	n/a N/A	N/A N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES	Mineral Spirits	N/A	D001	0.00	0.00	13743.14	0.00	1.37% 0.00	
NO		N/A	N/A		0.00				
YES	Mineral Spirits Monomer, free	N/A N/A		0.00		0.00	0.00	0.00% 0.00	
NO 641	Naphtha	n/a N/A	D001 N/A	0.00 0.00	0.00 0.00	6.46 0.00	0.00	0.00% 0.00	
	-						0.00	0.00% 0.00	
NO NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Nitric Acid Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00 0.00% 0.00	
NO NO		N/A	N/A	0.00	0.00	0.00	0.00		
NO NO	Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
	Phenols	N/A	D001	0.00	0.00	147.90	0.00	0.01% 0.00	
710	Phosphoric Acid	N/A	D001	0.00	0.00	0.51	0.00	0.00% 0.00	
NO	Phthalate Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
NO	Polyisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00% 0.00	
YES	Polyvinyl Chloride	N/A	D001	0.00	0.00	7.14	0.00	0.00% 0.00	

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

EPA I.D.#:

EPA CODES:

.. LOCATION : TOLEDO APD,

D001

OHD-005041843

ERR DOOS

D007

D018 D035

F003 F005

CONTRACTOR'S CODE: WPS-32174

DUPONT CODE: WOT-13R

ERR STATE: N/A

NAME OF WASTE: WASTE PAINT LIQUID

		non-listed		BPA WASTE		entration (mg/l)	411 -41			
	const	ituents present	CODE	CODE	Wstwtrs com		All other solvent	-		
					WASTE	STD	WASTE	STD		
	=====		=======================================		#ADID		***********	:::::::::::::::::::::::::::::::::::::::		
NO		Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Gly M-methyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Glycol M-methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Propylene Glycol	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Silica	N/A	D001	0.00	0.00	0.00	0.00	0.19%	0.00
NO		Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,2	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	p-	Toluene Sulfonic Acid	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
	2,4,5	-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Triethylamine	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Vanadium	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Vinyl Alcohol	N/A	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Water	N/A	N/A	0.00	0.00	5000.	0.00	0.09%	0.00

	CHARACTERIZATI OF 1	ON FORM (WCF)		I	3.I.DUPONT	DENEMOU	IRS & CO						DATE	:October	19, 1990
( ) 1	LOCATION : EPA I.D.# :	TOLEDO API OHD-005041	-						CO	NTRACTOR'		WPS-29335 WOT-12R			
	EPA CODES : DO			D007	D008 D018	B D03	15 FI	003			STATE:				
II.NAMI	E OF WASTE:	solvent ri	ecovery s	SLUDGE	F005		0	0							
III.	COMPOSITI	ION:												•	
Α.	MAJOR COMPONENTS						ONE TIME PICAL AN			D. CON UPPER	CENTRATION	RANGE LOWER			URE LIMITS H ++OSHA
1.	Lead / Zinc (	thromates other	er listed	nioments				0.30%	,	0.30	<del></del>	0.10%		05mg/m	3.05mg/m3
. 2.		Extenders, Oth						31.20%		31.20		29.00%		_	10mg/m3
3.	Various Solve		-	io i igacii	00			51.00%		51.00		60.90%		25 ррп	25рра
4.	n/a		20.1.00					0.00%		0.00		0.00%		n/a	n/a
5.	Polymer Solid	is						17.00%		17.00		9.00%		n/a	n/a
6.	Water							0.50%		0.50		1.00%		n/a	n/a
B. T/	ABLE OF ALL CO	MPONENTS INC	LUDING MA	JORS LIST	TED ABOVE	(IN PPW)			DOES TH	B WASTE C	ONTAIN:				Mg/L
Sb	136.00	Br 0.00	) Co	13.19	Pb. 295	1.00 A	lg	0.00	SULF	IDES:	NO			AMT:	N/A
As	0.59	Cd 13.19	9 Cu	242.00	lín	2.80 S	ir	15.68	CYAN	IDES:	NO			AMT:	N/A
Ba		Ce 0.00		0.00	•	).14 *S	5	0.00	P	CB'S:	NO			AMT:	N/A
. Be	0.00- 1	Cl 41.70	) <b>*</b> [.	0.00	. Ni. 4	1.22 1	1	0.29	PHENO	LICS:	YES .	. : .	100	· AMT:	0.09%
Bi		Cr 929.00		5626.00			Sn .	8.92	INSEC'C		NO			AMT:	
Solu		0.00					<u>I</u> n	8019.00	PESTIC		NO .			AMT:	
OTHE	R: no	one .	AMT:n/a		Se	0.04 Z	kr.	0.00	HERBIC	•	NO .			AMT:	
			:						RODEN'C		NO			AMT:	
	TEST METHOD U		EPTOX/1	CLP:	TOT ME	rals:				XINS:	NO	•		AHT:	
(	YS.STATE € 25		SLUDGE		D ADDUGO	3 160			ED SOLVENT		YES			AMT:	21.47%
( ) (S			IF COM	LATNREZ VI			DACH N		>1000Mg/1		NO COLED			AMT:	41.70
	LTI - PHASED? N THE WASTE E	NO NO		Davinos 41			BACH P				% SOLID			100.00	% LIQUID
+U#.	ו או האוש אחו א		VDC		וממש סיבע	זער פו סכ	וואדד אווי	IN LAVED.		100 00	W UAT HAD				
		ONTAINER:	YES N/A	POURED?	yes <b>x</b> fri			ID LAYBR: SE WATER	:	100.009 0	X VOLUME ESTIMA	TED SPEC.	GRAV :	0.95 +/	- 0.10
		CONTAINER: SHIPPING COL	N/A	:		% SEPAR			:		ESTIMA	TED SPEC.	CRAV :	0.95 +/	
*PRI	essure of (	CONTAINER: SHIPPING CON	N/A NTAINERS: AMT:500	:	MC (	% SEPAR CODE: OF	ATE PHA		:	O APPROX	ESTIMA WGHT	TED SPEC.	GRAV :		ER
*PRI	ESSURE OF C	CONTAINER: SHIPPING CON	N/A NTAINERS: AMT:500	: 00 GALS SIZE	MC (	% SEPAR CODE: OF	ATE PHA:	se water	:	0	ESTIMA WGHT TNR	TED SPEC.	CRAV :	CONTAIN	ER
*PRI V. VI.	ESSURE OF C BULK: T/ TYPE DRUMS: OTHER SIZE:	CONTAINER: SHIPPING CON	N/A NTAINERS: AMT:500	O GALS	MC ( MTRL CONSTRUC STEEL N/A	X SEPAR CODE: OF CTION	304 DOT 17H N/A	SE WATER	:	O APPROX PER CN	ESTIMA WGHT TNR	TED SPEC.	GRAV :	CONTAIN LABEL U	ER
*PRI V. VI.	BULK: T/ BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC):	SHIPPING CONTAINER: SHIPPING CONTAINER  17H,17E N/A PROPERTIES: 100F	N/A WTAINERS: ANT:500 550 N/A	O GALS	MC ( MTRL CONSTRUC STEEL N/A	% SEPARCODE: OF CTION  J/LB: 16	304 DOT 17H N/A	SE WATER	:	0 APPROX PER CN 425	ESTIMA WGHT TNR	TED SPEC.		CONTAIN LABEL U N/A	ER
*PRI V. VI. FLA:	BULK: T/  BULK: T/  TYPE  DRUMS:  OTHER SIZE:  SH POINT(CC):  COLOR:	CONTAINER: SHIPPING CON W  17H,17E N/A PROPERTIES: 100F Red/Brwn	N/A WTAINERS: ANT:500 550 N/A	O GALS	MC ( MTRL CONSTRUC STEEL N/A BT	% SEPAR CODE: OF CTION J/LB: 16	304 DOT 17H N/A	SPEC ,17E ODOR:	ĀEZ	0 APPROX PER CN 425	ESTIMA WGHT TNR	CORROSI		CONTAIN LABEL U N/A N/A	ER
*PRI V. VI. FLAS	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YE	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn	N/A WTAINERS: ANT:500 556 N/A Ph:	O GALS SIZE	MC ( MTRL CONSTRUC STEEL N/A BT	% SEPARCODE: OF CTION  J/LB: 16	304 DOT 17H N/A	SPEC 17E ODOR: 3.20%	ŸES	0 APPROX PER CN 425	ESTIMA WGHT TNR Various S	CORROSI		CONTAIN LABEL U N/A N/A	ER
*PRI V.  VI.  FLA: OSHA CA TOXIC	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn 3S ERI	N/A WTAINERS: ANT:500 556 N/A Ph:	O GALS SIZE	MC ( MTRL CONSTRUC STEEL N/A BT	% SEPAR CODE: OF CTION J/LB: 16	304 DOT 17H N/A	SPEC 17E ODOR: 3.20%	ĀEZ	0 APPROX PER CN 425	ESTIMA WGHT TNR  Various S	CORROSI olvents	VE?	CONTAIN LABEL U N/A N/A	ER
VI.  VI.  FLA:  OSHA C.  TOXIC	BULK: T/ TYPE DRUMS: OTHER SIZE: EN POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn ES 0 ERI	N/A WTAINERS: ANT:500 556 N/A Ph:	O GALS SIZE	MC G MTRL CONSTRUC STBEL N/A BTI	% SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT %	304 DOT 17H N/A	SPEC 17E ODOR: 3.20%	ŸES	APPROX PER CN 425 N/A	ESTIMA WGHT TNR Various S n/a RADIOACT	CORROSI' olvents VIVE? N	<b>ve</b> ?	CONTAIN LABEL U N/A N/A	ER
*PRI VI.  FLA:  OSHA C.  TOXIC TOXIC PYI  SHOCK :	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn SS C C C C C C C C C C C C C C C C C C	N/A WTAINERS: ANT:500 N/A Ph:	O GALS SIZE	MC G MTRL CONSTRUC STBEL N/A BTI	% SEPAR CODE: OF CTION J/LB: 16	304 DOT 17H N/A	SPEC 17E ODOR: 3.20%	ŸES	APPROX PER CN 425 N/A	ESTIMA WGHT TNR  Various S	CORROSI' olvents VIVE? N	<b>ve</b> ?	CONTAIN LABEL U N/A N/A	ER
*PRI VI.  VI.  FLA:  OSHA CA TOXIC  PYI SHOCK:  OTHER?	BULK: T/ TYPE DRUMS: OTHER SIZE: EN POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn ES 0 ERI	N/A WTAINERS: ANT: 500 N/A Ph:	SIZE SIZE	MC ( MTRL CONSTRUC STEEL N/A BTC ASH CO	X SEPAR CODE: OF CTION  J/LB: 16 9 COTTENT X	304 DOT 17H N/A	SPEC 17E ODOR: 3.20%	ŸES	APPROX PER CN 425 N/A	ESTIMA WGHT TNR Various S n/a RADIOACT	CORROSI' olvents VIVE? N	<b>ve</b> ?	CONTAIN LABEL U N/A N/A	ER
*PRI VI.  VI.  FLA:  OSHA C.  TOXIC PYI  SHOCK S  OTHER? VII.	BULK: T/  BULK: T/  TYPE  DRUMS:  OTHER SIZE:  SH POINT(CC):  COLOR:  ARCINOGEN? YH ?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO	SHIPPING CON  SHIPPING CON  TH, 17E  N/A  PROPERTIES:  100F  Red/Brwn  SS  ERI  Not known	N/A WTAINERS: AMT: 500 N/A Ph: R	OO GALS SIZE S	MC ( MTRL CONSTRUC STEEL N/A BT' ASH C	% SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT % SIVE?NO	304 DOT 17H N/A 5000	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A	ESTIMA WGHT TNR  Various S n/a RADIOACT ETIOLOGI	CORROSI olvents IVE? N CAL? N	<b>VR?</b> O	CONTAIN LABEL U N/A N/A	ER SED
VI. FLA: OSHA C. TOXIC PYI SHOCK SOTHER? VII. D.O D.O	BULK: T/ TYPE DRUMS: OTHER SIZE: EN POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO SENSITIVE? NO (EXPLAIN) .T.SHIPPING NA .T. HAZARD CLA	SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E N/A PROPERTIES: 100F Red/Brwn ES ) ERI ) Not known AME:RQ, WASTE ASSIFICATION:	N/A  WTAINERS: ANT:500  550 N/A  Ph: R  D.O.T. FLAMMABU FLA	OO GALS SIZE S	MC G MTRL CONSTRUG STEEL N/A BTG ASH CO EXPLOG INFORMATION, N.O.S,	X SEPAR CODE: OF CTION J/LB: 16 9 ONTENT X SIVE?NO ON	304 DOT 17H N/A 5000	SPEC ,17E ODOR: 3.20%	ŸES	APPROX PER CN 425 N/A	ESTIMA WGHT TNR Various S n/a RADIOACT	CORROSI olvents IVE? N CAL? N	<b>VR?</b> O	CONTAIN LABEL U N/A N/A	ER
*PRI V.  VI.  FLA:  OSHA C.  TOXIC PYI  SHOCK SOTHER?  VII.  D.O  D.O  D.O	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO (EXPLAIN) .T.SHIPPING NA .T. HAZARD CLA .T. PLACARD:	SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E N/A PROPERTIES: 100F Red/Brwn ES 0 ERI 0 Not known AME:RQ, WASTE ASSIFICATION: FLAMMABLE	N/A VTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI	OO GALS SIZE S S SHIPPING LE LIQUID	MC ( MTRL CONSTRUC STEEL N/A BTC ASH CO EXPLO: INFORMATIC N.O.S, IQUID U.N	X SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT % SIVE:NO ON UNI	304 304 DOT 17H N/A 5000	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A	ESTIMA WGHT TNR  Various S n/a RADIOACT ETIOLOGI	CORROSI olvents IVE? N CAL? N	<b>VR?</b> O	CONTAIN LABEL U N/A N/A	ER SED
*PRI  VI.  FLA:  OSHA C.  TOXIC PYI  SHOCK:  OTHER?  VII.  D.O  D.O  D.O  D.O	BULK: T/ TYPE DRUMS: OTHER SIZE: EN POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NO SENSITIVE? NO (EXPLAIN) .T.SHIPPING NA .T. HAZARD CLA	SHIPPING CON  SHIPPING CON  THE N/A  PROPERTIES:  100F  Red/Brwn  SS  Not known  AME:RQ, WASTE  ASSIFICATION:  FLAMMABLE  FLAMMABLE	N/A VTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI	OO GALS SIZE S S SHIPPING LE LIQUID	MC ( MTRL CONSTRUC STEEL N/A BTC ASH CO EXPLO: INFORMATIC N.O.S, IQUID U.N	X SEPAR CODE: OF CTION J/LB: 16 9 ONTENT X SIVE?NO ON	304 304 DOT 17H N/A 5000	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A	ESTIMA WGHT TNR  Various S n/a RADIOACT ETIOLOGI	CORROSI olvents IVE? N CAL? N	<b>VR?</b> O	CONTAIN LABEL U N/A N/A	ER SED
*PRI  VI.  FLA:  OSHA C.  TOXIC :  PYI.  B.O  D.O  D.O  VIII.	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH POPHORIC? NO SENSITIVE? NO (EXPLAIN) T. SHIPPING NA T. HAZARD CLA T. LABEL:	SHIPPING CONTAINER: SHIPPING CONTAINER: 17H,17E N/A PROPERTIES: 100F Red/Brwn SS ) Not known AME:RQ, WASTE ASSIFICATION: FLAMMABLE PLAMMABLE VOLUME:	N/A VTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI FLA	SIZE SHIPPING LE LIQUID	MC ( MTRL CONSTRUCT STEEL N/A BTC ASH CO EXPLOSI INFORMATICA ,N.O.S, IQUID U.N N.A	X SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT % SIVE:NO ON UNI	304 304 DOT 17H N/A 5000	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A NO	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents PIVE? N CAL? N D008	VE?	CONTAIN LABEL U N/A N/A	ER SED
*PRI  VI.  FLA:  OSHA C.  TOXIC :  PYI.  B.O  D.O  D.O  VIII.	BULK: T/  TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NC ROPHORIC ? NC (EXPLAIN) .T. SHIPPING NA .T. HAZARD CLA .T. PLACARD: .T. LABEL: UAL: NA	SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E N/A PROPERTIES: 100F Red/Brwn SS ) ERI ) Not known AME:RQ, WASTE ASSIFICATION: FLAMMABLE FLAMMABLE VOLUME: /A	N/A VTAINERS: AMT: 500  550 N/A Ph: R  D.O.T. FLAMMABI FLA	SIZE SHIPPING LE LIQUID AMMABLE L	MC (MTRL CONSTRUCT STEEL N/A BT' ASH CONSTRUCT N/O.S, IQUID U.N N.A	X SEPAR CODE: OF CTION  J/LB: 16 9 ONTENT X SIVE?NO ON UNI .NO.:UNI	DOT 17H N/A 5000 DOO 1993 DOO	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents IVE? N CAL? N	VE?	CONTAIN LABEL U N/A N/A	ER SED
*PRI V.  VI.  FLA:  OSHA C.  TOXIC  PYI  SHOCK:  OTHER?  VII.  D.O  D.O  D.O  VIII.  NNII	BULK: T/  TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH ?(EXPLAIN) NC ROPHORIC ? NC SENSITIVE? NC (EXPLAIN) .T. SHIPPING NA .T. PLACARD: .T. LABEL: UAL: NA	SHIPPING CON  SHIPPING CON  THE N/A  PROPERTIES:  100F  Red/Brwn  SS  Not known  AME:RQ, WASTE  ASSIFICATION:  FLAMMABLE PLAMMABLE PLAMMABLE VOLUME:  /A  SS: (TREATMEN'	N/A VTAINERS: AMT:500  550 N/A Ph: R  D.O.T. FLAMMABI FLA LIQUID T OF SPII	SIZE SHIPPING LE LIQUID AMMABLE L	MC ( MTRL CONSTRUC STEEL N/A BT' ASH CO EXPLOS INFORMATIC N.O.S, IQUID U.N N.A EST:N/A TY SUGGEST	X SEPAR CODE: OF CTION  J/LB: 16 9 ONTENT X SIVE?NO ON UNI .NO.:UNI	DOT 17H N/A 5000 DOO 1993 DOO	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A NO	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents PIVE? N CAL? N D008	VE?	CONTAIN LABEL U N/A N/A	ER SED
*PRI V.  VI.  FLA:  OSHA C.  TOXIC  PYI  SHOCK ( OTHER?  VII.  D.O  D.O  D.O  VIII.  NMI	BULK: T/  TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO (EXPLAIN) T. SHIPPING NA T. HAZARD CLA T. PLACARD: T. LABEL: UAL: N/ REMARK	SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E N/A PROPERTIES: 100F Red/Brwn ES O ERI O ERI O Not known AME:RQ, WASTE ASSIFICATION: FLAMMABLE PLAMMABLE PLAMMABLE VOLUME: VA SSS'S for ings	N/A TTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI FLA LIQUID T OF SPII redients	SIZE SHIPPING LE LIQUID AMMABLE L CHIS REQUI	MC G MTRL CONSTRUC STEEL N/A BTI ASH CO EXPLOS INFORMATIO N.O.S, IQUID U.N N.A EST:N/A	X SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT X  SIVE?NO  DN  UNI .NO.:N/A	DOT 17H N/A 5000 DOO 1993 DOO	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A NO	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents PIVE? N CAL? N D008	VE?	CONTAIN LABEL U N/A N/A	ER SED
*PRI V.  VI. FLA: OSHA C. TOXIC PYI SHOCK: OTHER? VII. D.O D.O D.O VIII. NO	BULK: T/ TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YE ?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO (EXPLAIN) .T. HAZARD CLA .T. PLACARD: .T. LABEL: UAL: N/ REMARY OTE #1: MS	SHIPPING CONTAINER:  SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E  N/A  PROPERTIES:  100F  Red/Brwn  SS  ERI  O  Not known  AME:RQ, WASTE  ASSIFICATION:  FLAMMABLE  PLAMMABLE  VOLUME:  /A  SS: (TREATMEN'  SDS's for inguist be incine)	N/A TTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI FLA LIQUID T OF SPII redients	SIZE SHIPPING LE LIQUID AMMABLE L CHIS REQUI	MC G MTRL CONSTRUC STEEL N/A BTI ASH CO EXPLOS INFORMATIO N.O.S, IQUID U.N N.A EST:N/A	X SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT X  SIVE?NO  DN  UNI .NO.:N/A	DOT 17H N/A 5000 DOO 1993 DOO	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A NO	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents PIVE? N CAL? N D008	VE?	CONTAIN LABEL U N/A N/A	ER SED
PRI VI.  FLA:  OSHA C.  TOXIC  PYI  SHOCK:  OTHER?  VII.  D.O  D.O  C.O  VIII.  NAI  NAI  NAI  NAI  NAI  NAI  NAI	BULK: T/  TYPE DRUMS: OTHER SIZE: SH POINT(CC): COLOR: ARCINOGEN? YH?(EXPLAIN) NO ROPHORIC ? NO SENSITIVE? NO (EXPLAIN) T. SHIPPING NA T. HAZARD CLA T. PLACARD: T. LABEL: UAL: N/ REMARK	SHIPPING CONTAINER:  SHIPPING CONTAINER:  SHIPPING CONTAINER:  17H,17E N/A PROPERTIES: 100F Red/Brwn SS Not known AME:RQ, WASTE ASSIFICATION: FLAMMABLE PLAMMABLE PLAMMABLE VOLUME:  (A SS: (TREATMEN' SDS's for inguist be incine)	N/A TTAINERS: ANT:500  550 N/A Ph: R  D.O.T. FLAMMABI FLA LIQUID T OF SPII redients	SIZE SHIPPING LE LIQUID AMMABLE L CHIS REQUI	MC G MTRL CONSTRUC STEEL N/A BTI ASH CO EXPLOS INFORMATIO N.O.S, IQUID U.N N.A EST:N/A	X SEPAR CODE: OF CTION  J/LB: 16 9 CONTENT X  SIVE?NO  DN  UNI .NO.:N/A	DOT 17H N/A 5000 DOO 1993 DOO	SPEC ,17E ODOR: 3.20%	YES REACTIVE?	APPROX PER CN 425 N/A NO	ESTIMA WGHT TNR Various S n/a RADIOACT ETIOLOGI	CORROSI olvents PIVE? N CAL? N D008	VE?	CONTAIN LABEL U N/A N/A	ER SED

PREPARED BY:

A.PARCHOMENKO

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1 OF 2

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

. Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 MANIFEST NUMBER: NAME OF WASTE: SOLVENT RECOVERY SLUDGE EPA CODES: DO01 D005 D007 D018 D035 P003 P005 CONTRACTOR'S CODE : FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) WPS-29335 DUPONT WASTE CODE: WOT-12R OHIO BPA CODE : DUPONT EPA I.D.#: OHD-005041843 N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S. BPA REGULATIONS (40 CFR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_ CASE-BY-CASE EXTENSION !

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

## IS THIS WASTE A WASTEWATER ?: NO

		RICTED FIFY	SOLVENTS PRESENT	ርርክዩ	EPA WASTE	Wetstre'co	ntai-	All othe	r chant	CALIFORNIA LISTE					
į		APPLI 3	TCC's & F001-F005	Spent Solve	nts	ning spent WASTE	solvents STD	solvent- WASTB	wastes - STD	Name			(Mg/L) Treatment Reg.LevStandard		
1	ES			D001	F003	0.00	0.050	308.9		Arsenic	NA .	0.59	500 None	NO	
			ne ·	D001 D018	F005	0.00	0:070	49.0	3:.700	Cadmium		0.59	100	NO	
	ES			D001	F003 .	0.00	5.000	12880.7	5.000	Chromium(CrVI)		929	500	YES	
,	0	Carbon	disulfide .	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000	NO	
		Carbon	tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead		2951	500	YES	
	NO	Chlord	lane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA	0.14	20 None	NO	
	NO	Chlore	benzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel		44.22	134 None	NO	
	NO	Chlore	oform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0.04	100	NO	
	NO	Cresol	ls,o,m,p(cresylic a	an/a	N/A	0.00	2.820	0.0	0.750	Thallium		0.29	130 None	NO	
	NO	Cycloh	nexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO	
	NO	2,4-	-D	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC's		N/A	>0.99% Incinr'tn	NO	
	NO	1,2-	-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO	
	NO	1,4-	Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated org	anic compour	nds.			
	NO	1,2-	-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	1,1-	Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	2,4-	-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Endrin	ì	N/A	N/A	0.00	0.000	0.0	0.020						
	NO	Ethoxy	yethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin						
	NO	Ethyl	acetate	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Ethyl	benzene	N/A	N/A	0.00	0.050	0.0	0.053						
	NO	Ethyl	ether	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Heptac	chlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexacl	nloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexaci	nlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexach	nloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
7	/ES	Isobut	tanol	D001	F005	0.00	5.000	119.5	5.000						
	NO	Lindar	ne	N/A	N/A	0.00	0.000	0.0	0.400						
1	YES	Methar	nol	D001	F003	0.00	0.250	6042.0	0.750						

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Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 NUMBER: NAME OF WASTE: SOLVENT RECOVERY SLUDGE EPA CODESDOO1 D005 D007 D018D035 F003 0 F005 CONTRACTOR'S CODE : TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) FROM LOCATION & ADDRESS: WPS-29335 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-12R OHIO EPA CODE : N/A NO Methoxychlor N/A N/A 0.00 0.000 0.0 10.000 Waste Code Description &. (Mg/L) D001 D035 F005 0.00 0.050 YES Methyl ethyl ketone 844.1 0.750 or Treatment Subcategory Reg.Lev. YES Methyl isobutyl ketone D001 F003 0.00 0.050 465.1 0.330 NO Methylene chloride N/A N/A 0.00 0.200 0.0 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DRACT NO NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.0 0.960 D001: Low TOC Liq.(<10 wt% TOC) <10% 268.42(a)DEACT NO NO Nitrobenzene N/A N/A 0.00 0.650 0.0 0.125 D001: Hi TOC Liq. (>10 wt% TOC) >10% 268.42(a)RORGS YES 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.0 0.000 D001: n/a 268.42(A) FSUBS NO NO Pentachlorophenol N/A N/A 0.00 0.000 0.000 D001: 0.0 n/a 268.42(A) INCIN NO Pyridine N/A N/A 0.00 1.120 0.330 D002: 0.0 Corr, all subcat's & CA list n/a 268.42(a)DEACT NO NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive n/a 268.42(a)DEACT NO D001 F005 -YES Toluene 0.00 1.120 6774.8 0.330 D004: Arsenic (As) 5-268.41.3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.0 0.500 D005: Barium (Ba) 100 268.41.3(a) YES N/A NO 2.4.5-TP (Silvex) N/A 0.00 0.000 0.0 1.000 D006: NO Cadmium (Cd) 1 268.41,3(a) NO 1.1.2-T-chloro-1.2.2-t-fN/A N/A 0.00 0.062 0.0 0.091 D007: Chromium (Cr) 5. 268.41,3(a) YES NO 1,1,1-Trichloroethane N/A N/A 0.00 0.030 7.600 D008: 0.0 Lead batteries n/a 268.41.3(a) NO N/A 0.00 NO 1.1.2-Trichloroethane N/A 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41,3(a) YES N/A N/A 0.00 0.062 Wstwtrs(<1.0 wt% TOC & TSS) "O Trichloroethylene 0.0 0.091 D009: 0.2 268.41,3(a) VARIENO Trichlorofluoromethane N/A N/A 0.00 0.050 0.0 0.960 D009: Low Nonwstwtr(<260ppm Hg) 0.2 268.41,3(a) VARIENO mO 2,4,5-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a) RMERCNO 1 268.41,3(a) NO 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) NO NO Vinyl chloride N/A N/A 0.00 0.000 0.0 0.000 D011: Silver (Ag) NO 5 268.41,3(a) YES Xylene D001 F003 0.00 0.050 9009.2 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory: Signature of Generators Representative: Date:

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

1 of 3

EPA I.D.:

EPA CODES:

.. LOCATION : TOLEDO APD,

OHD-005041843

D005

D007 D018 D035 P003 F005

DUPONT CODE: WOT-12R . STATE : N/A

CONTRACTOR'S CODE: WPS-29335

D001 II. NAME OF WASTE: SOLVENT RECOVERY SLUDGE

Other identified constituents present		EPA WA	STE EPA WASTI CODE	Conc Wstwtrs co ning spent WASTE		All other solvent wa		Level( Conc'n.R	eg.Lev	/. : <del>-</del>
NO	Acetic Anhydride		0 N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Acrylic Acid		O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Acrylonitrilre		0 N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Aluminum Oxide		0 N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Ю	Ammonia		O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Amyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO p-	Benzoquinone		0 N/A	0.00	0.00	0.00	0.00	0.00%	0.00	•
₩0	Butoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	100 m
YES n-	Butyl acetate	N/A	- N/A	0.00	0.00	0.00	0.00	0.51%	0.00	-
NO	Butyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO:	Butyl Acrylate		O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	•
NO	Butyl Aldehyde, Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
140	Butyl Benzyl Phthalate	•	0 N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
.0	Butyl Catechol, tertiary	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
t-	Butyl Peroxy	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butyl Peroxy Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Butyrol Acetone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Calcium	- •	O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	CRESOLS		O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Cyclohexyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO 2,			O N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	D-ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Diacetone Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Dibasic esters	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dibutyl Phthalate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dibutyltin Dilaurate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO or	tho-Dichlorobenzene	N/A	N/A	0.00	0.00	0.00	0.00			
NO	Diethyl Amino Ethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diisobutyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO n,		N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Dimethyl Polysiloxane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Diphenyl	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Diphenyl Oxide	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ester Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
ን 2-	Ethoxyethanol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
1	Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Ethyl Aceto Acetate	N/A	N/A	0.00	0.00	0.00	0.00		0.00	

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

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. LOCATION : TOLEDO APD,

OHD-005041843 EPA I.D.#:

D001 EPA CODES:

D005

D007 D018 D035 F003 F005

DUPONT CODE: WOT-12R

CONTRACTOR'S CODE: WPS-29335

STATE: N/A

II. NAME OF WASTE: SOLVENT RECOVERY SLUDGE

		ituents present	CODE	CODE .	Wstwtrs co ning spent WASTE		All other solvent w WASTE	-		
NO	====	Ethyl Acrylate	======= N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Bthyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Bthyl Gly M-butyl Bther	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Bthyl Gly M-ethyl E-Acetate	F003	D001	0.00	0.00	114.58	0.00	0.01%	
YES		Ethylene Glycol	F003	D001	0.00	0.00	372.30	0.00	0.04%	
NO		Bthylene Glycol	N/Å	N/A	0.00	0.00	0.00	0.00	0.00%	
- NO		Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES			F003	D001	0.00	0.00	77:01		0.01%	0.00
NO		Purfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Glycol Ethers	F003	D001	0.00		6111.16	0.00	0.61%	
YES	•	Heptane	F003	D001	0.00	0.00	12768.19	0.00	1.28%	•
NO		Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
		Hexylene Glycol .	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
1		Hydrocarbon Solvent	D001	D001	0.00	0.00	6030.24	0.00	0.60%	
NO		Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Isopropyl Alcohol	F003	D001	0.00	0.00	1108.06	0.00	0.11%	
YES		Lithium Hydroxide Monohydrate		N/A	0.00	0.00	0.00	0.00	0.09%	
NO		Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl Methacryla	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Methyl-n-Amyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Mineral Spirits	F003	D001	0.00	0.00	15443.14	0.00	1.54%	
NO		Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Monomer, free	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Nitric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
		Phenols	D026	D001	0.00	0.00	147.90	0.00	0.01%	
u		Phosphoric Acid	N/A	D001	0.00	0.00	0.51	0.00	0.00%	
NO		Phthalate Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Polychlorinated Biphenyls	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Polyisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
YES		Polyvinyl Chloride	F003	D001	0.00	0.00	7.14	0.00	0.00%	

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

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EPA I.D.#:

EPA CODES:

L. LOCATION :

TOLEDO APD,

OHD-005041843

D001

D005

D007 D018 D035 F003 F005

CONTRACTOR'S CODE: WPS-29335

DUPONT CODE : WOT-12R

STATE: N/A

NAME OF WASTE: SOLVENT RECOVERY SLUDGE

		non-listed ituents present	EPA WASTE	EPA WASTE CODE	Conc.	entration (mg/l)	All other	cnent		
	COMBL	reactics present	CODE	CODE	ning spent		solvent w			
					WASTE	STD	WASTE	STD		
NO	::::::	Propyl Alcohol	N/A	======= N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Gly M-methyl E-Acetate	•	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Glycol M-methyl Bther		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Propylene Glycol	P003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.19%	0.00
NO		Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,1	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,2	,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	2,3,4	,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	p-	Toluene Sulfonic Acid	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
	2,4,5	-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Triethylamine	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
NO		Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Vinyl Alcohol	F003	D001	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Water	N/A	N/A	0.00	0.00	కాలు	0.00	0.00%	0.00

WASTE CHARACTERIZATION FORM (WCF)	E.I.DUPONT DEN	IEMOURS	& CO.						DATE	:October	19, 1990
F 1 OF 1  LOCATION: TOLEDO APD,  EPA I.D.#: OHD-005041843  EPA CODES: D001 D018 D035F003	F005N/A	N/A	N/A	N/A	CON	DUPO		WPS-2933' WOT-09R N/A	7		
II.NAME OF WASTE: WASTE RESIN, LIQUID				-,				•			
III. COMPOSITION:										• •	
A. HAJOR COMPONENTS			TIME OR L ANALYSIS			D. C UPP	ONCENTRATIO BR	N RANGE LOWER			SURE LIMITS TH ++OSHA
1. Lead / Zinc Chromates, other listed pigme	nts		0.	00%		0.	00%	0.00%	-	.05mg/n	3.05mg/m3
2. Iron Oxides, Extenders, Other Organic Pigm				00%			00%	0.00%			10mg/m3
3. Polymer Solids			51.			51.		39.00%		none	none
<ol><li>Various Solvents, see attached</li></ol>			49.			49.		61.00%		25 ppm	25 ppm
5. n/a				00%			00%	0.00%		n/a	n/a
<ol> <li>Water</li> <li>TABLE OF ALL COMPONENTS INCLUDING MAJORS I</li> </ol>	TOTER ADOVE ITM	DDM/	0.	00%	ስለውሮ ጥሂር	. 0. Greens	UU% CONTAIN:	0.00%		none	none
Sb 0.00 *Br 0.00 Co 0.0			0.		SULFI		NO NO			AMT -	Mg/L N/A
As 0.00 Cd 0.00 Cu 0.0		_	0.		CYANI		NO NO				N/A
Ba 0.00 Ce 0.00 *F 0.0			0.			B'S:	NO				N/A
Be 0.00 *Cl 16.38 *I 0.0	0 Ni. 0.00	) ¶1	0 .	00 -	PHENOL	ICS:	YBS			AMT	0.000364
Bi 0.00 Cr 0.00 Fe 0.0			. 0.	00 J	INSEC'CI		NO				N/A
Soluble Salts: 0.00	*P 0.00		0.		PESTICI		NO				N/A
OTHER: none AMT:n/a	Se 0.00	) Zr	0.		HERBICI		Ю				N/A .
SHOW TEST METHOD USED> RPTOX/TCLP:	TOT. HETALS			i	RODEN'CI	(INS: Tare:	NO . NO	• •			N/A N/A
T". PHYS.STATE @ 25*C (ENTER): LIQUID	IOI - HETADA	).	ί.	ISTRD 9	SOLVENTS		YES			AMT:	
IS THERE A DUSTING HAZARD IF CONTAINERS	ARR OPENED ?	NO			1000Mg/L		NO			AMT:	
*MULTI - PHASED? NO			CH PHASE:	J., J.,			00% SOLID				% LIQUID
			LIQUID LAY	ER:			00% AOTOME				•
	D?YES XFREE F	LOWING			C	100.	00% AOPONE	ATED SPEC	. GRAV :		
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A	D?YES XFREE F	LOWING	LIQUID LAY		(	100.	00% AOPONE	ATED SPEC	. GRAV :		
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A V. SHIPPING CONTAINERS:	D?YES XFREE F	PLOWING SEPARATE	LIQUID LAY PHASE WA		C	100.	00% AOPONE	ATED SPEC	. GRAV :		
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A	D?YES XFREE F	PLOWING SEPARATE	LIQUID LAY PHASE WA		C	100.	00% VOLUNE ESTIM	ATED SPEC	. GRAV :	0.90 +/	/- 0.10
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS	D?YES XFREE F X S  HC CODE HTRL OF	PLOWING SEPARATE	LIQUID LAY PHASE WA		C	100.	00% VOLUME ESTIM X WGHT	ATED SPEC	. GRAV :	0.90 +/	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE	D?YES XFREE F X S  HC CODE HTRL OF CONSTRUCTIO	PLOWING SEPARATE	LIQUID LAY PHASE WA		C	APPRO	00% VOLUME ESTIM X WGHT CNTNR	ATED SPEC	. GRAV :	CONTAIN	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS	D?YES XFREE F X S  HC CODE HTRL OF	PLOWING SEPARATE	LIQUID LAY PHASE WA		C	APPRO	00% VOLUME ESTIM X WGHT	ATED SPBC	. GRAV :	0.90 +/	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 GALS  TYPE SIZE DRUMS: 17H,17E 55G	D?YES XFREE F X S  MC CODE MTRL OF CONSTRUCTION STEEL	PLOWING SEPARATE	LIQUID LAY PHASE WA DOT SPEC 17H,17E		C	APPRO PER	00% VOLUME ESTIM X WGHT CNTNR	ATED SPEC	. GRAV :	CONTAIN LABEL U	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AHT:5000 GALS  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F	D?YES %FREE F % S MC CODE MTRL OF CONSTRUCTIO STEEL N/A	PLOWING SEPARATE	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A		(	APPRO PER	OO% VOLUME ESTIM X WGHT CNTNR 25	CORROS		CONTAIN LABEL U	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 GALS  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F COLOR: C1r/Amber Ph:	D?YES %FREE F % S MC CODE MTRL OF CONSTRUCTIO STEEL N/A BTU/LE	PLOWING BEPARATE 3: 304 DN 3: 16000	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER:	( Yes	APPRO PER	00% VOLUME ESTIM X WGHT CNTNR	CORROS		CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS: BULK: T/W AMT:5000 GALS  TYPE SIZE DRUMS: 17H,17E 55G OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F COLOR: Clr/Amber Ph: CSHA CARCINOGEN? YES	D?YES %FREE F % S MC CODE MTRL OF CONSTRUCTIO STEEL N/A	PLOWING BEPARATE 3: 304 DN 3: 16000	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER: OR: 1	YES	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT COTHR 25	CORROS		CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Clr/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR	D?YES %FREE F % S MC CODE MTRL OF CONSTRUCTIO STEEL N/A BTU/LE	PLOWING BEPARATE 3: 304 DN 3: 16000	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER: OR: 1		APPRO PER	OO% VOLUME ESTIM  X WGHT CHTHR 25  Various	CORROS Solvents	ive?	CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPBD? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: Clr/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO	D?YES *** AFREE F  ** S  ** MC CODE  ** MTRL OF  CONSTRUCTIO  STEEL  N/A  BTU/LE  5 - S  ASH CONTE	PLOWING BEPARATE E: 304 ON B: 16000 ENT %:	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER: OR: 1	YES	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various n/a RADIOAC	CORROS: Solvents TIVE?	no (ne.	CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPBD? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO	D?YES %FREE F % S MC CODE MTRL OF CONSTRUCTIO STEEL N/A BTU/LE	PLOWING BEPARATE E: 304 ON B: 16000 ENT %:	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER: OR: 1	YES	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CHTHR 25  Various	CORROS: Solvents TIVE?	ive?	CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPBD? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR PYROPHORIC ? NO SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known	D?YES XFREE F X S  MC CODE MTRL OF CONSTRUCTIO STEEL N/A  BTU/LE 5 - S ASH CONTE	PLOWING BEPARATE E: 304 ON B: 16000 ENT %:	LIQUID LAY PHASE WA DOT SPEC 17H,17E N/A	TER: OR: 1	YES	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various n/a RADIOAC	CORROS: Solvents TIVE?	no (ne:	CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR PYROPHORIC ? NO SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known VII. D.O.T. SHIPPI	D?YES ***FREE F	PLOWING BEPARATE 3: 304 DN 3: 16000 BNT %:	DOT SPEC 17H,17E N/A	OR: Y 20% REAC	yes Ctive?	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? !	10 10 1AE\$	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPBD? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES: FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR PYROPHORIC ? NO SHOCK SENSITIVE? NO OTHER? (EXPLAIN) Not known	D?YES XFREE F X S  MC CODE MTRL OF CONSTRUCTIO STEEL N/A  BTU/LE 5 - S ASH CONTE  EXPLOSIVE NG INFORMATION I, FLAMMABLE LIQU	PLOWING BEPARATE 3: 304 DN 3: 16000 BNT %:	DOT SPEC 17H,17E N/A	TER: OR: 1	yes Ctive?	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various n/a RADIOAC	CORROS Solvents TIVE? !	no (ne:	CONTAIN LABEL UN/A	/- 0.10 Ver
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable	D?YES XFREE F X S  MC CODE MTRL OF CONSTRUCTIO STEEL N/A  BTU/LE 5 - S ASH CONTE  EXPLOSIVE NG INFORMATION I, FLAMMABLE LIQU	PLOWING SEPARATE  304  3: 16000  3: 16000  ENT %:	DOT SPEC 17H,17E N/A	OR: Y 20% REAC	yes Ctive?	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? !	10 10 1AE\$	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID	D?YES ***FREE F	PLOWING SEPARATE  304  3: 16000  3: 16000  ENT %:  ENO  JUN1993	DOT SPEC 17H,17E N/A	OR: Y 20% REAC	yes Ctive?	APPRO PER 4 N/A	OO% VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? !	10 10 1AE\$	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION  D.O.T. HAZARD CLASSIFICATION: flammable  D.O.T. PLACARD: FLAMMABLE  D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:	MC CODE  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LE  STEEL  N/A  BTU/LE  EXPLOSIVE  EXPLOSIVE  ING INFORMATION  FLAMMABLE LIQUE  U.N.NO.  N.A.NO.	PLOWING SEPARATE  304  3: 16000  3: 16000  ENT %:  ENO  JUN1993	DOT SPEC 17H,17E N/A	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A NO DO35	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? ! ICAL? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. LABEL: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME: ANNUAL: 15000 gals THIS RE	MC CODE  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LE  STEEL  N/A  BTU/LE  STEEL  N/A  BTU/LE  STEEL  N/A  BTU/LE  LIQUITY  ASH CONTE  EXPLOSIVE  LIQUITY  U.N.NO.  N.A.NO.	PLOWING SEPARATE 3: 304 DN 3: 16000 3: 16000 3: 10000 3: 10000 3: 10000 3: 10000 3: 10000	DOT SPEC 17H,17E N/A  OD 0.	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  OSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. LABEL: PLAMMABLE D.O.T. LABEL: PLAMMABLE LIQUID  VIII. VOLUME:  ANNUAL: 15000 gals THIS RE REMARKS: (TREATMENT OF SPILLS/ SA	MC CODE MTRL OF CONSTRUCTIO STEEL N/A  BTU/LE 5 - S ASH CONTE  EXPLOSIVE ING INFORMATION I, FLAMMABLE LIQU Pliquid U.N.NO. N.A.NO.	PLOWING SEPARATE 3: 304 DN 3: 16000 3: 16000 3: 10000 3: 10000 3: 10000 3: 10000 3: 10000	DOT SPEC 17H,17E N/A  OD 0.	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A NO DO35	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? ! ICAL? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:  ANNUAL: 15000 gals THIS RE  REMARKS: (TRRATMENT OF SPILLS/ SA  NOTE \$1: MSDS's for ingredients attack	D?YES **FREE F ** S  MC CODE  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LE  5 - S  ASH CONTE  EXPLOSIVE  MG INFORMATION  FLAMMABLE LIQUID  U.N.NO.  N.A.NO.  QUEST:n/a  FETY SUGGESTIONS  ied	ELOWING SEPARATE  E: 304  ON  B: 16000  ENT %:  E:NO  JIUN1993  ::N/A	DOT SPEC 17H,17E N/A  OD 0.	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A NO DO35	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? ! ICAL? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AHT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:  ANNUAL: 15000 gals THIS RE  REMARKS: (TREATMENT OF SPILLS/ SAME NOTE \$1: MSDS's for ingredients attach NOTE \$1: MSDS's for ingredients attach NOTE \$2: Material must be incinerated,	D?YES **FREE F ** S  MC CODE  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LE  5 - S  ASH CONTE  EXPLOSIVE  MG INFORMATION  FLAMMABLE LIQUID  U.N.NO.  N.A.NO.  QUEST:n/a  FETY SUGGESTIONS  ied	ELOWING SEPARATE  E: 304  ON  B: 16000  ENT %:  E:NO  JIUN1993  ::N/A	DOT SPEC 17H,17E N/A  OD 0.	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A NO DO35	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? ! ICAL? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED
*CAN THE WASTE BE PUMPED? YES POURE  *PRESSURE OF CONTAINER: N/A  V. SHIPPING CONTAINERS:  BULK: T/W AMT:5000 GALS  TYPE SIZE  DRUMS: 17H,17E 55G  OTHER SIZE: N/A N/A  VI. PROPERTIES:  FLASH POINT(CC): 100F  COLOR: C1r/Amber Ph:  CSHA CARCINOGEN? YES  TOXIC ?(EXPLAIN) NO ERR  PYROPHORIC ? NO  SHOCK SENSITIVE? NO  OTHER? (EXPLAIN) Not known  VII. D.O.T. SHIPPING NAME:RQ, WASTE RESIN SOLUTION D.O.T. HAZARD CLASSIFICATION: flammable D.O.T. PLACARD: FLAMMABLE D.O.T. LABEL: FLAMMABLE LIQUID  VIII. VOLUME:  ANNUAL: 15000 gals THIS RE  REMARKS: (TRRATMENT OF SPILLS/ SA  NOTE \$1: MSDS's for ingredients attack	D?YES **FREE F ** S  MC CODE  MTRL OF  CONSTRUCTION  STEEL  N/A  BTU/LE  5 - S  ASH CONTE  EXPLOSIVE  MG INFORMATION  FLAMMABLE LIQUID  U.N.NO.  N.A.NO.  QUEST:n/a  FETY SUGGESTIONS  ied	ELOWING SEPARATE  E: 304  ON  B: 16000  ENT %:  E:NO  JIUN1993  ::N/A	DOT SPEC 17H,17E N/A  OD 0.	OR: Y 20% REAC	YES CTIVE?	APPRO PER 4 N/A NO DO35	OOX VOLUME ESTIM  X WGHT CNTNR 25  Various  n/a RADIOAC ETIOLOG	CORROS Solvents TIVE? ! ICAL? !	n/a no no	CONTAIN LABEL E N/A N/A	/- 0.10 Ver USED

PREPARED BY:

A.PARCHOMENKO

DATE:October 19, 1990

(	. Disposal Site & Address	:Ross Incineration S	ervices, Inc. * 394 Giles Rd. * Gr	afton, OH 44044 * (216)748-2171	EPA ID.NO.: OHD 04841566	35
	MANIFEST NUMBER:	_NAME OF WASTE:	WASTE RESIN, LIQUID	BPA CODES: D001 N/A	D018 D035 F003 N/A N/A	N/A ERR 0
	FROM LOCATION & ADDRESS: DUPONT EPA I.D.#: OHD-0050	·	emainsville Rd.,Toledo, OH 43613 ( DUPONT WASTE CODE: WOT-09R	Ph. 419-478-1211)	CONTRACTOR'S CÔDE : OHIO EPA CODE :	WPS-29337 N/A
	<del></del>		A REGULATIONS (40 CFR PART 261) ! DOUS WASTE THAT HAS BEEN PRETREATE	D AND MEETS THE LAND DISPOSAL RE	STRICTIONS STANDARDS !	
	•		WASTE SUBJECT TO A NATIONAL C	<del></del> -		

PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE

# IS THIS WASTE A WASTEWATER ?: NO

TREATMENT STANDARDS ARE AS FOLLOWS:

	RICTED SOLVENTS PRESENT	EPA WASTE CODE	EPA WASTE		Concentration			CALIFORNIA LISTEI	CONSTITUE	VTS PRES	BNT	
IDEN ALL CABLI	APPLI		101 - 011				er spent wastes STD	Constituent Name			l(Mg/L) Treatment. Reg.LevStandard	Mark All Applicable
YES	Acetane :	D001	F003	NA NA	0.050	1453.19	0.590	Arsenic	NA	0	500 None	NO .
YES	Benzene	D001 D018.	F005	NA	0.070	230.30	3.700	Cadmium ·		0		NO .
YES	n-Butyl alcohol	D001	F003	NA	5.000	60593.76	5.000	Chromium(CrVI)		. 0	500	NO
	Carbon disulfide	N/A	N/A	NA	1.050	0.00	4.810	Cyanide		N/A	1000	NO
	Carbon tetrachloride	N/A	N/A	NA	0.050	0.00	0.960	Lead		0	500	NO
NO	Chlordane	N/A	N/A	NA	0.050	0.00	0.030	Mercury	NA	0.05	20 None	NO
NO	Chlorobenzene	N/A	N/A	NA	0.150	0.00	0.050	Nickel		0	134 None	NO
NO	Chloroform	N/A	N/A	NA	0.000	0.00	0.000	Selenium		0	100	NO
NO	Cresols,o,m,p(cresylic	aN/A	N/A	NA	2.820	0.00	0.750	Thallium		0	130 None	NO
NO	Cyclohexanone	N/A	N/A	NA	0.125	0.00	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO
NO	2,4-D	N/A	N/A	NA	0.000	0.00	10.000	Liquids w/ HOC's		16.38	9999 Incinr'tn	NO
NO	1,2-Dichlorobenzene	N/A	N/A	NA	0.650	0.00	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO
NO	1,4-Dichlorobenzene	N/A	N/A	NA	0.000	0.00	0.000	*Halogenated orga	anic compou	nds.		
NO	1,2-Dichloroethane	N/A	N/A	NA	0.000	0.00	0.000	·				
NO	1,1-Dichloroethylene	N/A	N/A	NA	0.000	0.00	0.000					
NO	2,4-Dinitrotoluene	N/A	N/A	NA	0.000	0.00	0.000					
NO	Endrin	N/A	N/A	NA	0.000	0.00	0.020					
NO	Ethoxyethanol	N/A	N/A	NA	Inci/Bio	0.00	Incin					
	Ethyl acetate	N/A	N/A	NA	0.050	0.00	0.750					
NO	Ethyl benzene	N/A	N/A	NA	0.050	0.00	0.053					
NC	Ethyl ether	N/A	N/A	NA	0.050	0.00	0.750					
NO	Heptachlor (& its hydro	xN/A	N/A	NA	0.000	0.00	0.000					
NO	Hexachloro-1,3-butadien	eN/A	N/A	NA	0.000	0.00	0.000					
NO	Hexachlorobenzene	N/A	N/A	NA	0.000	0.00	0.000					
NO	Hexachloroethane	N/A	N/A	NA	0.000	0.00	0.000					
YES	Isobutanol	D001	F005	NA	5.000	561.83	5.000					
NO	Lindane	N/A	N/A	NA	0.000	0.00	0.400					
YES	Methanol	D001	F003	NA	0.250	28422.50	0.750					

G

Date:

Disposal Site & Address):Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 MANIFEST NUMBER: NAME OF WASTE: WASTE RESIN, LIQUID EPA CODESDOO1 D018 D035 F003 N/A N/A N/A N/A 0 CONTRACTOR'S CODE : TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) FROM LOCATION & ADDRESS: WPS-29337 OHIO BPA CODE : DUPONT EPA I.D. : OHD-005041843 DUPONT WASTE CODE: WOT-09R N/A NO Methoxychlor N/A 0.000 N/A 0.00 10.000 Waste Code Description &. (Mg/L) YES Methyl ethyl ketone D001 D035 F005 NA 3970.49 0.750 or Treatment Subcategory 0.050 Reg. Lev. YES Methyl isobutyl ketone D001 F003 NA 0.050 2188.04 0.330 0.960 D001: NO Methylene chloride N/A N/A NA 0.200 0.00 Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT NO 268.42(a)DEACT NO Methylene chloride(PharmN/A N/A NA 0.440 0.00 0.960 D001: Low TOC Liq. (<10 wt% TOC) <10% NO Nitrobenzene N/A 0.125 D001: Hi TOC Liq.(>10 wt% TOC) N/A NA 0.650 0.00 >10% 268.42(a) RORGS NO 2-Nitropropane N/A N/A NA Incin/Cho 0.00 0.000 D001: n/a 268.42(A) FSUBS TG\$ NO Pentachlorophenol . N/A N/A NA 0.000 0.00 0.000 D001: n/a 268.42(A) INCIN YES NO Pyridine N/A N/A NA 1.120 0.00 0.330 D002: Corr, all subcat's & CA list n/a 268.42(a) DEACT N/A NA NO Tetrachloroethylene N/A 0.079 0.00 0.050 D003: Reactive n/a 268.42(a)DBACT NO F005 1.120 31870.17 YES Toluene. D001 NA 0.330 D004: Arsenic (As) 5 268.41.3(a) VARIENO NO Toxaphene N/A N/A NA 0.000 0.00 0.500 D005: Barium (Ba) 100 268.41.3(a) NO NO 2,4,5-TP (Silvex) N/A N/A NA 0.000 0.00 1.000 D006: Cadmium (Cd) 1 268.41.3(a) NO NO 1.1.2-T-chloro-1.2.2-t-fN/A 5 268.41,3(a) N/A NA 0.062 0.00 0.091 D007: Chromium (Cr) NO NO 1,1,1-Trichloroethane N/A N/A NA 0.030 0.00 7.600 D008: Lead batteries n/a = 268.41.3(a)MO NO 1,1,2-Trichloroethane N/A 0.030 7.600 D008: N/A NA 0.00 Other lead (Pb) 5 268.41,3(a) NO. NO Trichloroethylene N/A N/A NA 0.062 0.00 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41.3(a) VARIENO | Trichlorofluoromethane N/A N/A NA 0.050 0.00 0.960 D009: Low Nonwstwtr (<260ppm Hg) 0.2 268.41,3(a)VARIENO .. 0 2,4,5-Trichlorophenol N/A NA N/A 0.000 0.00 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a) RMERCNO NO 2,4,6-Trichlorophenol N/A N/A 0.000 0.000 D010: NA 0.00 Selenium (Se) 1 268.41,3(a) MO NO Vinyl chloride N/A N/A NA 0.000 0.00 0.000 D011: Silver (Ag) 5 268.41,3(a) NO YES Xylene D001 F003 NA 0.050 42379.83 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory: Signature of Generators Representative:

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

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EPA I.D.#:

EPA CODES:

. LOCATION : TOLEDO APD,

OHD-005041843

D001 D018

D035

F003 N/A

N/A

N/A N/A CONTRACTOR'S CODE: WPS-29337 DUPONT CODE: WOT-09R

STATE : N/A

II. NAME OF WASTE: WASTE RESIN, LIQUID

			identified ituents present	EPA WA	ASTE EPA WASTE CODE	Con Wstwtrs o	centration (	(mg/l)	All other	spent						
	. ,	,	·			ning spen WASTE	t solvents STD		solvent w	-	·	Level( Conc'n.R				
	====	=====	Acetic Anhydride	N/A	N/A	0.00	10000.00	:=====		10000.00		0.00%	0.00			į
			Acrylic Acid	N/A	N/A		10000.00			10000.00		0.00%				
			Acrylonitrilre	N/A	N/A		10000.00			10000.00		0.00%				
	NO		Aliphatic Hydrocarbon	N/A	N/A		10000.00		0.00	10000.00		0.00%				
	NO		Aluminum Oxide	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
			Ammonia	N/A	N/A		10000.00		•	10000.00		0.00%	0.00			
	NO		Amyl Acetate	N/A	N/A		10000.00		0.00	10000.00		0.00%				
		p-	Benzoquinone	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%				
	NO.	-	Butoxyethanol	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00		•	
	YES		Butyl acetate	P003	D001		10000.00			10000.00		0.00%	0.00			
	NO		Butyl Acetate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
				N/A	D001		10000.00			10000.00		0.00%	0.00			
	NO		Butyl Aldehyde, Oxide	N/A	N/A		10000.00		. 0.00	10000.00	•	0.00%	0.00	•	•	
	NO		Butyl Benzyl Phthalate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	۳,		Butyl Catechol, tertiary	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
(		t-	Butyl Peroxy	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00	-		
١.	NO		Butyl Peroxy Acetate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Butylene Glycol	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Butyrol Acetone	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Calcium	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		CRESOLS		ERR N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Cyclchexyl Amine	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO	2,4-	D	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		D-ethyl Gly M-butyl E-Acetate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		D-ethyl Gly Methyl Ether	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Diacetone Alcohol	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Dibasic esters	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Dibutyl Phthalate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Dibutyltin Dilaurate	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO	ortho	-Dichlorobenzene	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Diethyl Amino Ethanol	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Diisobutyl Ketone	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO	n,n-	Dimethyl dodecylamine	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Dimethyl Hydroxy Ethyl Amine	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Dimethyl Polysiloxane	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Diphenyl	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Diphenyl Oxide	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Ester Alcohol	N/A	N/A		10000.00		0.00	10000.00		0.00%	0.00			
	NO		Ether	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	40	2-	Ethoxyethanol	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	ΝO		Ethyl 3-ethoxy propionata	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			
	NO		Ethyl Aceto Acetate	N/A	N/A	0.00	10000.00		0.00	10000.00		0.00%	0.00			

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

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. LOCATION : TOLEDO APD,

BPA I.D.#: OHD-005041843

EPA CODES:

D001 D018

D035

F003 N/A N/A N/A N/A

DUPONT CODE: WOT-09R

CONTRACTOR'S CODE : WPS-29337

ERR STATE: N/A

II. NAME OF WASTE: WASTE RESIN, LIQUID

Ethyl Acrylate		r non-listed tituents present	EPA WAST	E EPA WASTE CODE	Wstwtrs contai-	All other	-			
Start Acrylate	. i .				ning spent solvents					
MO	::-:::::			========				========	======	:::::::::::
NO   Sthyl Gif +-butyl Ether   N/A   N/A   0.00 10000.00   538.76   10000.00   0.000		•						0.00%	0.00	
PSS   Ethyl Gly Methyl E-Acetate   M/A   M/A   0.00 10000.00   538.76   10000.00   0.00   0.00								0.00%	0.00	
YES   Chylene Glycol   W/A   W/A   0.00   10000.00   1761.16   10000.00   0.0										
NO						•				
NO										
YES										
NO   Furfury  Alcohol					0.00 10000.00	0.00	10000.00	0.00%	0.00	
NO			N/A		0.00 10000.00	362.62	10000.00			4 - 10 - 10 - 10 - 10 - 10 - 10 - 10 - 1
YES				•				0.00%	0.00	
YES			N/A	N/A	0.00 10000.00	0.00	10000.00	0.00%	0.00	
Fex   Hexane   N/A   N/A   0.00   10000.00   0.33   10000.00   0.00x   0.00		Glycol Bthers		D001	0.00 10000.00	28748.52	10000.00	0.00%	0.00	•
Herylene Glycol   N/A		Heptane	•	D001	. 0.00 10000.00	. 60064.27	10000.00	0.00%	0.00	•
Hydrocarbon Solvent		Hexane	N/A	NIA	0.00 10000.00	0.33	10000.00	0.00%	0.00	• •
NO	0	Hexylene Glycol	N/A	N/A	0.00 10000.00	0.00	10000.00	0.00%	0.00	
NO		Hydrocarbon Solvent	N/A	D001	0.00 10000.00	35306.07	10000.00	0.00%	0.00	
YES	NO	Isobutyl Acetate	N/A	N/A	0.00 10000.00	0.00	10000.00	0.00%	0.00	
NO	NO	Isophorone	N/A	N/A	0.00 10000.00	0.00	10000.00	0.00%	0.00	
Methacrylic Acid	YES	Isopropyl Alcohol	N/A	Dool	0.00 10000.00	5212.46	10000.00	0.00%	0.00	
Methane Sulfonic Acid   N/A   N/A   0.00 10000.00   • . 10000.00   0.00x   0.00	NO	Lithium Hydroxide Monohydrate	N/A	N/A	0.00 10000.00	0.00	10000.00	0.00%	0.00	
Methane Sulfonic Acid   N/A   N/A   0.00 10000.00   • . 10000.00   0.00x   0.00		Methacrylic Acid	N/A	N/A	0.00 10000.00	ь.	10000.00	0.00%	0.00	
Methyl Acrylate		Methane Sulfonic Acid		N/A		٠.	10000.00		0.00	
NO         Methyl ethyl acetate         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00 0.00         0.00		Methyl Acrylate				0.				
NO	NO	Methyl ethyl acetate				0.00	10000.00			
NO         Methyl Hethacryla         N/A         D001         0.00 10000.00         →         10000.00         0.00%         0.00           NO         Methyl-2-Pyrrolidone         N/A         N/A         0.00 10000.00         0.00 0.00 </td <td>NO</td> <td>Methyl Ethyl Ketoxime</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	NO	Methyl Ethyl Ketoxime								
NO         Methyl-2-Pyrrolidone         N/A         N/A         0.00 10000.00         0.00 100000.00		Methyl Methacryla								
NO	NO	Methyl-2-Pyrrolidone		N/A		0.00				
YES         Mineral Spirits         D001         0.00 10000.00         72595.60         10000.00         0.00% 0.00         0.00           NO         Mineral Spirits         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           YES         Monomer, free         N/A         N/A         0.00 10000.00         6103.90 10000.00         0.00% 0.00           NO         Naphtha         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Naphtha         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Nitric Acid         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00% 0.00           YES         Nitrobenzene         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00% 0.00           NO         Nitrobenzene         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00% 0.00           NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Octanes         N/A <td< td=""><td>NO</td><td>Methyl-n-Amyl Ketone</td><td></td><td></td><td></td><td>0.00</td><td></td><td></td><td></td><td></td></td<>	NO	Methyl-n-Amyl Ketone				0.00				
MO	YES					72595.60	10000.00			
YES         Monomer, free         N/A         N/A         0.00 10000.00         95.60 10000.00         0.00% 0.00         0.00           YES         Naphtha         N/A         DOC         0.00 10000.00         6103.90 10000.00         0.00% 0.00         0.00           NO         Naphtha         N/A         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Nitrolenzene         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00% 0.00         0.00% 0.00           NO         Nitropenzene         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Octanes         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Petroleum Ether         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 1	NO	Mineral Spirits	N/A	N/A			10000.00			
YES         Naphtha         N/A         DOC         0.00 10000.00         6103.90         10000.00         0.00%         0.00           NO         Naphtha         N/A         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00%         0.00%         0.00           NO         Nitrobenzene         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00%         0.00         0.00           NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00%         0.00         0.00           NO         Octanes         N/A         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00%         0.00%         0.00           NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00%         0.00%         0.00           NO         Petroleum Ether         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00%         0.00%         0.00           Phenols         N/A         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00%         0.00%         0.00 <td< td=""><td>YES</td><td>Monomer, free</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	YES	Monomer, free								
NO         Naphtha         N/A         N/A         N/A         0.00 10000.00         0.00 100000.00         0.00 10000.00         0.00 100000.00	YES	Naphtha								
NO         Nitric Acid         N/A         N/A         0.00 10000.00         0.00 100000.00         0.00 10000.00         0.00 1000	NO	Naphtha	N/A	N/A	0.00 10000.00		10000.00			
YES         Nitrobenzene         N/A         N/A         0.00 10000.00         0.01 10000.00         0.00% 0.00           NO         Nitromethane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00% 0.00%           NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00           NO         Octanes         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00% 0.00%           NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00%           NO         Petroleum Ether         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00% 0.00%         0.00% 0.00           Phenols         N/A         N/A         0.00 10000.00         364.00 10000.00         0.00% 0.00         0.00% 0.00           Phosphoric Acid         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 0.00         0.00% 0.00           NO         Polychlorinated Biphenyls         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00	NO	Nitric Acid	N/A							
NO         Nitromethane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00           NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00% 0.00           NO         Octales         N/A         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00% 0.00           NO         Petroleum Ether         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00% 0.00           Phenols         N/A         N/A         0.00 10000.00         364.00 10000.00         0.00% 0.00         0.00           Phosphoric Acid         N/A         N/A         0.00 10000.00         P. 10000.00         0.00% 0.00           NO         Polychlorinated Biphenyls         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00	YES	Nitrobenzene								
NO         Nitropropane         N/A         N/A         0.00 10000.00         0.00 100000.00         0.00 100000.00         0.00 10	NO	Nitromethane								
NO         Octanes         N/A         N/A         0.00 10000.00<	NO	Nitropropane								
NO         Octyl Phenol Polyeth Alc         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00 0.00 0.00         0.00 0.00 0.00         0.0		Octanes								
NO       Petroleum Ether       N/A       N/A       0.00 10000.00       0.00 100000.00       0.00 10000.00       0.00 10000.00       0.00 100000.	NO	Octyl Phenol Polyeth Alc								
Phenols N/A N/A 0.00 10000.00 364.00 10000.00 0.00% 0.00 Phosphoric Acid N/A N/A 0.00 10000.00 • 10000.00 0.00% 0.00 Phthalate Anhydride N/A D001 0.00 10000.00 • 10000.00 0.00% 0.00 NO Polychlorinated Biphenyls N/A N/A 0.00 10000.00 0.00 10000.00 0.00% 0.00										
Phosphoric Acid         N/A         N/A         0.00 10000.00         ♥ 10000.00         0.00% 0.00           Phthalate Anhydride         N/A         D001         0.00 10000.00         • 10000.00         0.00% 0.00           NO         Polychlorinated Biphenyls         N/A         N/A         0.00 10000.00         0.00 10000.00         0.00 10000.00         0.00% 0.00		Phenols								
Phthalate Anhydride N/A D001 0.00 10000.00 • 10000.00 0.00% 0.00 0.00 NO Polychlorinated Biphenyls N/A N/A 0.00 10000.00 0.00 10000.00 0.00% 0.00		Phosphoric Acid								
NO Polychlorinated Biphenyls N/A N/A 0.00 10000.00 0.00 10000.00 0.00% 0.00										
	NO	•								
NO Polyisocyanate N/A N/A 0.00 10000.00 0.00 10000.00 0.00% 0.00	NO									
YES Polyvinyl Chloride N/A N/A 0.00 10000.00 33.29 10000.00 0.00% 0.00		**************************************								

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

EPA I.D.#: EPA CODES:

1. LOCATION: TOLEDO APD,

OHD-005041843 D001 D018

D035

F003

N/A

N/A N/A N/A

err

DUPONT CODE: WOT-09R STATE: N/A

CONTRACTOR'S CODE: WPS-29337

NAME OF WASTE: WASTE RESIN, LIQUID

	Other non-listed constituents present	CODE	TTE EPA WASTE Concentration (mg/l) CODE Wstwtrs containing spent solvents WASTE STD		All other solvent w WASTE	-			
110							10000.00	0 00m	0 00
NO.	• •	N/A	N/A		10000.00	0.00		0.00%	
		N/A	N/A		10000.00	0.00	10000.00		0.00
NO	•		N/A		10000.00	0.00	10000.00	0.00%	0.00
NO		-	N/A		10000.00	0.00	10000.00		0.00
<b>N</b> O		N/A	N/A		10000.00	0.00	10000.00	0.00%	0.00
YES		N/A	N/A		10000.00	5.85	10000.00	0.00%	
NO		N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO		N/A	N/A		10000.00	0.00	10000.00		
	Styrene Monomer	N/A	D001		10000.00	0.	10000.00		0.00
NO	Sulfuric Acid	N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO	1,1,1,Tetrachloroethane	N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO	1,1,2,Tetrachloroethane	N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO	2,3,4,Tetrachlorophenol	N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
	p- Toluene Sulfonic Acid	N/A	N/A	0.00	10000.00	0.	10000.00	0.00%	0.00
	2,4,5-TP (Silvex)	N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO		N/A	N/A	0.00	10000.00	0.00	10000.00	0.00%	0.00
NO		N/A	N/A		10000.00	0.00	10000.00		0.00
YES	Triethylamine	N/A	N/A		10000.00	106.82	10000.00	0.00%	0.00
NO		N/A	N/A		10000.00	0.00	10000.00		0.00
NO	•	N/A	N/A		10000.00	0.00	10000.00	0.00%	0.00
YES	Vanadium	N/A	N/A		10000.00	90.40	10000.00		0.00
	Vinyl Acetate Monomer	N/A	N/A		10000.00	0.	10000.00		0.00
YES	Vinyl Alcohol	N/A	N/A		10000.00	2.15	10000.00	0.00%	
YES	Water	N/A	N/A		10000.00	879.04	10000.00	0.00%	
1100	MMOCI	III II	M U	0.00	10000.00	013101	10000100	0.000	V100

```
WASTE CHARACTERIZATION FORM (WCF)
                                                E.I.DUPONT DENEMOURS & CO.
                                                                                                                          DATE :October 19, 1990
   ٦ 1
        LOCATION:
                      TOLEDO APD,
                                                                                          CONTRACTOR'S CODE: WPS-29283
                      OHD-005041843
                                                                                               DUPONT CODE: WOT-08R
       EPA I.D.# :
                      D001, D002, D003, F003
       EPA CODES :
                                                                                                STATE CODE: N/A
                      Wastewater contaminated W/Monomers
II. NAME OF WASTE:
III.
           COMPOSITION:
                                                               C.ONE TIME OR
                                                                                              D. CONCENTRATION
  A.
        MAJOR
                                                                                                                  RANGE
                                                                                                                                B.RXPOSURE LIMITS
      COMPONENTS
                                                               TYPICAL ANALYSIS
                                                                                                UPPER
                                                                                                                 LOWER
                                                                                                                                  +ACGTH ++OSHA
       Methyl Methacrylate Monomer
                                                                                                22,00%
                                                                                                                                100PPN 100PPN
                                                                            22,00%
                                                                                                                  4.00%
       Hydroxypropyl Acrylate
                                                                             9.10%
                                                                                                 9.10%
                                                                                                                  1.00%
                                                                                                                                0.5PPM 0.5PPM
       n.n-Dimethyl Hydroxy Ethyl Amine
                                                                             0.10%
                                                                                                 0.10%
                                                                                                                  0.10%
                                                                                                                                NONR
                                                                                                                                        NONR
  4.
       Xylene
                                                                            10.60%
                                                                                                10.60%
                                                                                                                  5.00%
                                                                                                                                100PPM 100PPM
  5.
       Hydrocarbons
                                                                             9.10%
                                                                                                 9.10%
                                                                                                                  5.00%
                                                                                                                                n/a
                                                                                                                                        100PPM
  6.
       Water
                                                                            49.60%
                                                                                                                 84.90%
                                                                                                49.10%
                                                                                                                                n/a
                                                                                                                                        n/a
  B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPM)
                                                                                     DOES THE WASTE CONTAIN:
                0 *Br
                                   Co
                                                                                0
                                                                                        SULFIDES:
                                                                                                                                   AMT: N/A
                    Cd
                                   Cu
                                                             Û
                                                                 Sr
                                                                                0
                                                                                        CYANIDES:
                                                                                                      MO
                                                                                                                                   AMT: N/A
  As
                                                  Mn
                               0 *P
                    Ce
                                              0
                                                  Hg
                                                                                           PCB'S:
                Ð
                                                             0
                                                                $S
                                                                                                      NO
                                                                                                                                   AMT: N/A
                                                  Ni.
                0 *C1
                               0...*[
                                                             0 - 11
                                                                                ٨..
                                                                                       PHENOLICS:
                                                                                                                                   AMT:
                                                                                      INSEC'CIDES:
                                                                 Sn
                                                                                                                                   AMT: N/A
                                                 *P
                                                             0
  Soluble
            Salts:
                                                                 Zn
                                                                                      PESTICIDES:
                                                                                                                                   AMT: N/A
  OTHER:
                                 AMT:n/a
                                                  Se
                                                             0
                                                                 Zr
                  none
                                                                                      HERBICIDES:
                                                                                                                                   AMT: N/A
                                                                                     RODEN'CIDES:
                                                                                                                                   AMT: N/A
  SHOW TEST METHOD USED>
                                 BPTOX/TCLP:
                                                    TOT.METALS:
                                                                                         DIOXINS:
                                                                                                      NO
                                                                                                                                   AMT: N/A
TV. PHYS.STATE @ 25*C (ENTER): Liquid
                                                                                                      YES
                                                                              LISTED SOLVENTS:
                                                                                                                                   AMT:
                                                                                                                                           10.00%
    IS THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED? NO
                                                                          HALOGENS >1000Mg/L:
                                                                                                      NO
                                                                                                                                   AMT:
                                                                                                                                               0
   *HULTI - PHASED?
                                                          VOL % OF EACH PHASE:
                                                                                              N/A
                                                                                                       SOLID
                                                                                                                                N/A
                                                                                                                                         LIQUID
                                         POURED?YES
   *CAN THE WASTE BE PUMPED?
                                 YES
                                                       %PREE PLOWING LIQUID LAYER:
                                                                                               100.00% VOLUME
   *PRESSURE OF CONTAINER:
                                                           % SEPARATE PHASE WATER:
                                                                                            0
                                                                                                         ESTIMATED SPEC. GRAV: 1.00 +/- 0.10
V.
                     SHIPPING CONTAINERS:
          BULK: T/W
                                                       MC CODE:
                                 AMT:5000 gals
                                                                  304
                                                      MTRL OF
                                                                                              APPROX WGHT
                                                                                                                                CONTAINER
                TYPE
                                                   CONSTRUCTION
                                                                                               PER CHTNR
                                        SIZE
                                                                      DOT SPEC
                                                                                                                                LABEL USED
             DRUMS:
                     17H,17E
                                     55G
                                                                      17H,17B
                                                    STEEL
                                                                                                  425
                                                                                                                                N/A
        OTHER SIZE:
                      N/A
                                     N/A
                                                    N/A
                                                                      N/A
                                                                                              N/A
                                                                                                                                N/A
VI.
                   PROPERTIES:
   FLASH POINT(CC):
                     100F
                                                        BTU/LB: 5000
                                                                                                                 CORROSTVE?
                                                                                                                                YES
             COLOR:
                      CLR/MILKY Ph: 2.00
                                                    9.00
                                                                                                      PUNGENT (Monomer)
                                                                             ODOR:
                                                                                     ABS
OSHA CARCINOGEN? NO
                                                     ASH CONTENT %:
                                                                             0.32%
TOXIC ?(EXPLAIN) YES Some ingredients in this waste are Inhilation & Skin Toxic REACTIVE?
                                                                                                      Strong Oxidizers can cause reactions.
    PYROPHORIC ? NO
                                                                                                       RADIOACTIVE?
                                                                                                                       NO
SHOCK SENSITIVE? NO
                                                     EXPLOSIVE?NO
                                                                                                       ETIOLOGICAL?
                                                                                                                       NO
OTHER? (EXPLAIN)
                      None known
VII.
                                 D.O.T. SHIPPING INFORMATION
   D.O.T. SHIPPING NAME:
                                   RQ, WASTE FLAMMABLE LIQUID, CORROSIVE, N.O.S., UN1992
                                                                                                               D001,D002,D003,F003
  D.O.T. HAZARD CLASSIFICATION:
                                     FLAMMABLE LIQUID / CORROSIVE MATERIAL
  D.O.T. PLACARD: FLAMMABLE
                                                       U.N.NO.: UN2924
  D.O.T. LABEL: FLAMMABLE LIQUID AND CORROSIVE N.A.NO.:
VIII.
                       VOLUME:
    NNUAL:
                                       THIS REQUEST: 8000 GALS
                                                                                       PER SHIPMENT:
                                                                                                               5000GALS
              REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)
```

PREPARED BY:

A. PARCHOMENKO

NOTE #1:

NOTE #2: NOTE #3:

NOTE #4:

N/A

MSDS's for ingredients attached

MUST BE INCINERATED, CANNOT BE LANDFILLED!

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1

## E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

. Disposal Site & Address):Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171

BPA ID.NO.: OHD 048415665

MANIFEST NUMBER: NAME OF WASTE: EPA CODES: D001.D002.D003.F003 Wastewater contaminated W/Monomers

CONTRACTOR'S CODE :

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-08R OHIO EPA CODE: N/A

1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.BPA REGULATIONS (40 CPR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A NATIONAL CAPACITY VARIANCE OR CASE-BY-CASE EXTENSION!

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. 1, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS POLLOWS:

#### IS THIS WASTE A WASTEWATER ?: YES

RESTR IDENT	CICTED SOLVENTS PRESENT	BPA WAS		Conce Wstwtrs con	entration ntai-	(mg/l) All other	er spent	CALIFORNIA LISTED	CONST	ITUENTS PRE	SENT	
ALL A				ning spent WASTE	solvents STD	solvent WASTE	wastes STD	Constituent Name	• . •		el(Mg/L) Treatment n.Reg.LevStandard	Mark All Applicable
	Acetone	N/A	N/A	0.00	0.050	0.0		Arsenic	NA		0 500 None	NO .
NO	Benzene	N/A	N/A	0.00	0.070	. 0.0		'Mercury	NA NA		0 20 None	NO
NO	n-Butyl alcohol	N/A	N/A	0.00	5.000	0.0	5.000	Nickel			0 134 None	NO
	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Thallium			0 · 130 None	NO
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Liquids v/PCB's		N/A	50 Incinr'tn	NO
NO	Chlordane	N/A	N/A	0.00	0.000	0.0	0.000	Liquids w/ HOC's			0 1000 Incinr'tn	NO
NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0	0.050	Solids w/ HOC's		N/A	1000 Incinr'tn	NO
NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated orga	nic com	pounds.		
NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750					
NO	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750					
NO	2,4-D	N/A	N/A	0.00	0.000	0.0	0.000					
NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.680	0.0	0.125					
140	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053					
NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
	Isobutanol	N/A	N/A	0.00	5.000	0.0	5.000					
	Lindane	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Methanol	N/A	N/A	0.00	0.250	0.0	0.750					

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E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

isposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 NAME OF WASTE: RPA CODES: D001.D002.D003.F003 MANIFEST NUMBER: Wastewater contaminated W/No CONTRACTOR'S CODE : FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) WPS-29283 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-08R OHIO EPA CODE : N/A N/A NO Methoxychlor N/A 0.00 0.000 0.0 0.000 Waste Code Description &, (Mg/L) NO Methyl ethyl ketone N/A N/A 0.00 0.050 0:0 0.750 or Treatment Subcategory Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.00 0.050 0.0 0.330 0.960 D001: NO Methylene chloride N/A N/A 0.00 0.200 0.0 Wstwtrs(<1.0 wt% TOC & TSS) n/a 268.42(a)DEACT YES Low TOC Liq. (<10 wt% TOC) NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.0 0.960 268.42(a)DRACT n/a NO Nitrobenzene N/A N/A 0.00 0.650 0.0 0.125 Hi TOC Liq.(>10 wt% TOC) n/a 268.42(a)RORGS n/a NO Pentachlorophenol N/A N/A 0.00 0.000 0.0 0.000 n/a 268.42(A)FSUBS n/a NO Pyridine N/A N/A 0.00 0.330 1.120 0.0 n/a 268.42(A)INCIN n/a N/A NO Tetrachloroethylene N/A 0.00 0.079 0.0 0.050 D002: Corr, all subcat's & CA list n/a 268.42(a)DEACT YES NO Toluene N/A N/A 0.00 1.120 0.0 0.330 D003: Reactive n/a 268.42(a)DEACT YES N/A NO Toxaphene N/A 0.00 0.000 0.0 0.000 D004: Arsenic (As) 5 268.41,3(a) VARIEn/a NO 2,4,5-TP (Silvex) N/A N/A 0.00 0.000 0.000 D005: 0.0 Barium (Ba) 100 268.41,3(a) n/a NO 1,1,2-Trichloro-1,2,2-trN/A N/A 0.00 1.050 0.0 0.960 D006: Cadmium (Cd) 1 268.41,3(a) n/a N/A NO 1,1,1-Trichloroethane N/A 0.00 1.050 0.0 0.410 D007: Chronium (Cr) 5 268.41,3(a) n/a NO 1.1.2-Trichloroethane N/A N/A 0.00 0.030 0.0 7.600 D008: Lead batteries n/a 268.41,3(a) n/a NO Trichloroethylene N/A N/A 0.00 0.062 0.0 0.091 Other lead (Pb) 5 268.41,3(a) n/a " Trichlorofluoromethane N/A N/A 0.00 0.050 0.960 D009: 0.0 Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41,3(a) VARIEYES Low Nonwstwir (<260ppm Hg) 0.2 268.41,3(a)VARIEn/a 2.4.5-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 NO 2,4,6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMERCn/a NO Vinyl chloride N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41,3(a) n/a YES Xylene D001 100000.00 0.15 D011: F003 0.05 0.0 Silver (Ag) 5 268.41,3(a) n/a The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment. Name and Title of Signatory: Signature of Generators Representative: Date:

II. NAME OF WASTE:

Wastewaters

DATE:

CONTRACTOR'S CODE: WPS-29283

0

. LOCATION: TOLEDO APD, EPA I.D.#: OHD-005041843

EPA CODES: D001, D002, D003, F003

Wastewater contaminated W/Monomers

DUPONT CODE: WOT-08R STATE CODE: N/A

All other

Other non-listed solvents present. Concentration (mg/l)

		containing spent solvents	spent solvent waste	
=====				
	Aliphatic Hydrocarbon	0	0	
	Amyl Acetate	. 0	0	
	Butyl acetate	0	0	
	Butyl Acetate	0	0	
	Butyl Aldehyde, Oxide	0 .	0	
	Butyl Catechol, tertiary	0	0	
	Butyl Peroxy	0	0	
	Butyl Peroxy Acetate	0 .	0	
9	Butylene Glycol	er ver skaller 🛈 🖛 .	to an over the Orientary	
10	Butyrol Acetone	0	0	
11	Cyclohexyl Amine	0	. 0	
12	Diacetone Alcohol	: 0	0 .	· ·
13	Dibasic esters	0	0	
14	Dibutyltin Dilaurate	0.	0	•
• 5	Dichlorobenzene	0	0	
]	Diethyl Amino Ethanol	0	. 0	
	Diethylene Glycol Methyl Ether	0	0	
	Diethylene Glycol Monobutyl Ether	0	0	
	Diethylene Glycol Monobutyl Ether Acetate	0	0	
	Diisobutyl Ketone	0	0	
	Dimethyl dodecylamine	0	0	
	Dimethyl Hydroxy Ethyl Amine	0	0	
	Dimethyl Polysiloxane	0	0	
	Ester Alcohol	0	D.	
	Ethoxyethanol	0	0	
	Rthyl 3-ethoxy propionata	. 0	0	
	Ethyl Aceto Acetate	0	0	
	Ethylene Glycol	0	Ď	
	Ethylene Glycol Monobutyl Ether	0	Ô	
	Ethylene Glycol Monobutyl Ether Acetate	0	Ô	
	Ethylene Glycol Monoethyl Ether	0	0	
	Ethylene Glycol Monoethyl Ether Acetate	0	Û	
	Ethylhexyl Alcohol	n	n	
	Furfuryl Alcohol	0	n	
	Glycerin	0	ń	
	Heptane	0	Û	
	Hexane	n	n	
	Hexylene Glycol	n	·	
	Hydrocarbon Solvent	0 0	0	
	Isobutyl Acetate	V N	0	
	Isophorone	υ Λ	0	
	Isopropyl Alcohol	V 1	v ^	
	TROPEOPLE MECHINE	U	V	

43 Methyl ethyl acetate

PAGE 6

LOCATION: TOLEDO APD,

EPA I.D.#: OHD-005041843

EPA CODES: D001,D002 0 0 0

CONTRACTOR'S CODE : WPS-29283
DUPONT CODE : WOT-08R
STATE CODE : N/A

II. NAME OF WASTE: Wastewater contaminated W/Monomers

Other non-listed solvents present.	Concentration	on (mg/l)	
outer han fraced advented presents	Wastewaters	All other	
	containing	spent solvent	
	spent solvents	waste	
44 Methyl Rthyl Ketoxime		 N	
45 Methyl-2-Pyrrolidone	0	0	
46 Methyl-n-Amyl Retone	0	n	
47 Mineral Spirits	0	0	
48 Naphtha	n	0	
49 Nitromethane	0	0	
50 Nitropropane	0	0	
51 Octanes	0	0	
52 Octyl Phenol Polyether Alcohol	Ō	0	
53 Petroleum Ether	. 0	0	
54 Phenols	Ō	0	
55 Polyisocyanate	Ō	0	
56 Propyi Alcohol	0	0	
57 Propyl Amine	ů O	Ō	
58 Propylene carbonate	0	900000	
9 Propylene Glycol	0	0	
ERR	0	0	
61 ERR	0	0	
62 Tri (2-hydroxyethyl) amine	0	0	
63 Triethanol Amine	0	0	
64 Triethyl Amine	n n	0	
65 ERR	0	0	
66 Turpentine	0	0	
67 Water	0	416 000	
68 0	0	, <b>,</b>	
69 0	0	n	
70 0	0	n	
71 0	Ů.	n	
72 0	0	0	
73 0	ń	0	
74 0	0	0	
75 0	n	0	
<b>76</b> 0	0	n	
77 0	n	ņ	
78 0	n	0	
79 0	Ů.	n	
80 0	0	0	
81 0	0	0	
82 0	0	n	
83 0	0	n N	
84 0	n	0	
5 0	0	0	
6 0	0	0	
87 0	0	0	
88 0	0	υ Λ	
89 0	0	v N	
90 0	n	r N	
VV U	U	V	

n/a

n/a

NOTE #4:

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A. PARCHOMENKO

LAND DISPOSAL RESTRICTION NOTICE - PAGE 1 OF 2

Disposal Site & Address):Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665

MANIFEST NUMBER: \_\_\_\_\_NAME OF WASTE: ACRYLONITRILE DRUMS W/DECONTAMINANT EPA CODES: D001 F003 0
0 0 0 0

FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S CODE: WPS-29339 DUPONT EPA I.D.\$: OHD-005041843 DUPONT WASTE CODE: WOT-07a OHIO EPA CODE: N/A

\_\_\_ 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) !

2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND MEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS!
THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_\_ CASE-BY-CASE EXTENSION!

XXX 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE TREATMENT STANDARDS ARE AS FOLLOWS:

## IS THIS WASTE A WASTEWATER ?: NO

	RESTR Ident		BPA WASTE CODE	BPA WASTE	Conc Wstwtrs_co	entration ntai-	(mg/l) All other		CALIFORNIA LISTE	ED CONSTI	TUENTS PR	ESENT	٠	
		PPLI TCC's & F001-F005	Spent Solve	ents	ning spent WASTE	solvents STD	solvent WASTB	wastes : STD	Constituent Name		Conc	'n.Reg.Lev	Standard	Mark All Applicable
	NO	Acetone ·	N/A	N/A	0.00	0.050	0.0		Arsenic	NA		0 500	None	NO
	NO.	Benzene	N/A	N/A	0.00	0.070	0.0	3.700	Cadmium			0 .100		NO
	NO	n-Butyl alcohol	N/A	N/A .	0.00	5.000	0.0	5.000	Chromium(CrVI)	•		0 500		NO
,-	ΝΛ	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000		NO
		Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead			0 500		NO
	М0	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Mercury	NA		0 20	None	NO .
	NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0	0.050	Nickel			0 134	None	NO
	NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium			0 100		NO
	NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium			0 130	None	NO
	NO	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50	Incinr'tn	NO
	NO	2,4-D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's	3		0 >0.99%	Incinr'tn	NO
	NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mg	Incinr'tn	NO
	NO	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated org	anic com	ipounds.			
	NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.020						
	NO	Ethoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin						
	NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053						
	NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750						
	NO	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
	NO	Isobutanol	N/A	N/A	0.00	5.000	0.0	5.000						
	NO	Lindane	N/A	N/A	0.00	0.000	0.0	0.400						
	NO	Methanol	N/A	N/A	0.00	0.250	0.0	0.750						

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

0

Disposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 NAME OF WASTE: P003 MANIFEST NUMBER: ACRYLONITRILE DRUNS W/DECONTEPA CODESDOOL 0 CONTRACTOR'S CODE: PROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) WPS-29339 DUPONT EPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-07a OHIO EPA CODE : N/A N/A N/A 0.00 0.000 10.000 Waste Code Description &, (Mg/L) NO Methoxychlor 0.0 NO Methyl ethyl ketone N/A Ň/A 0.00 0.050 0.0 0.750 or Treatment Subcategory Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.050 0.00 0.0 0.330 N/A N/A 0.00 0.200 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% 268.42(a)DEACT NO Methylene chloride 0.0 N/A 0.00 0.960 D001: NO Methylene chloride(PharmN/A 0.440 0.0 Low TOC Liq. (<10 wt% TOC) <10% 268.42(a)DEACT 0.125 D001: NO Nitrobenzene N/A N/A 0.00 0.650 0.0 Hi TOC Liq.(>10 wt% TOC) >10% 268.42(a) RORGS NO NO 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.0 0.000 D001: n/a 268.42(A)FSUBS NO Pentachlorophenol N/A N/A 0.00 0.000 0.0 0.000 D001: n/a 268.42(A)INCIN YES N/A N/A 0.00 1.120 0.330 D002: NO Pyridine 0.0 Corr.all subcat's & CA list n/a 268.42(a)DEACT NO. NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive n/a 268.42(a)DEACT NO N/A N/A - NO Toluene 0.00 1.120-0.0 0.330 D004: Arsenic (As) 5 268.41,3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.0 0.500 D005: Barium (Ba) 100 268.41,3(a) NO N/A NO 2,4,5-TP (Silvex) N/A 0.00 0.000 0.0 1.000 D006: Cadmium (Cd) 1 268.41,3(a) NO NO 1,1,2-T-chloro-1,2,2-t-fN/A N/A 0.00 0.062 0.091 D007: 0.0 Chronium (Cr) 5 268.41,3(a) NO NO 1,1,1-Trichloroethane N/A 0.030 7.600 D008: n/a .268.41,3(a) N/A 0.00 0.0 Lead batteries NO NO 1,1,2-Trichloroethane N/A N/A 0.00 0.030 0.0 7.600 D008: Other lead (Pb) · 5 268.41,3(a) NO 0.2 268.41,3(a)VARIENO Trichloroethylene N/A N/A 0.00 0.062 0.0 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) Trichlorofluoromethane N/A N/A 0.00 0.050 0.0 0.960 D009: Low Nonwstwtr(<260ppm Hg) 0.2 268.41.3(a)VARIENO m 2,4,5-Trichlorophenol N/A N/A 0.00 0.000 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMERCNO 0.0 NO 2.4.6-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D010: Selenium (Se) 1 268.41.3(a) NO NO Vinyl chloride N/A N/A 0.00 0.000 0.0 0.000 D011: Silver (Ag) NO 5 268.41,3(a) YES Xylene D001 F003 0.00 0.050 0.0 0.150 The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams. I believe the above information is true, accurate, and complete. I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting

a false certification, including the possibility of a fine or imprisonment.

Name and Title of Signatory:	
Signature of Generators Representative:	Date:

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE:October 19, 1990

1 of 3

EPA I.D.#:

EPA CODES:

.. LOCATION : TOLEDO APD,

OHD-005041843

D001

F003

CONTRACTOR'S CODE : WPS-29339

DUPONT CODE: WOT-07a

STATE : N/A

II. NAME OF WASTE: ACRYLONITRILE DRUNS W/DECONTAMINANT

Other identified constituents present		EPA WASTE	EPA WASTE	Concentration (mg/								
		CODE	CODE	Wstwtrs contai-		All other spent						
				ning spent solvents			solvent w		Level(i	Mg/L)		
					WASTE	STD	•	WASTE	STD	Conc'n.Reg.Lev.		
NO.	=====		N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		•	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		=	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Aliphatic Hydrocarbon	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Aluminum Oxide	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Ammonia	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Amyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
М	<b>p</b> -	Benzoquinone	N/A	N/A	0.00	0.00	•	0.00	0.00	0.00%	0.00	
		Butoxyethanol	N/A -	N/A	0.00	0.00	e kaja kan	0.00	0.00	0.00%	0.00	
Ю	n-	Butyl acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO.		Butyl Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Butyl Acrylate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Butyl Aldehyde, Oxide	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Butyl Benzyl Phthalate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
.,ر		Butyl Catechol, tertiary	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
	t-	Butyl Peroxy	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
М		Butyl Peroxy Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Butylene Glycol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Butyrol Acetone	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Calcium	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		CRESOLS	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Cyclohexyl Amine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO	2,4-	D	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		D-ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		D-ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		D-ethyl Gly Methyl Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Diacetone Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Dibasic esters	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Dibutyl Phthalate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Dibutyltin Dilaurate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO	ortho	-Dichlorobenzene	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Diethyl Amino Ethanol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Diisobutyl Ketone	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO	n,n-	Dimethyl dodecylamine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Dimethyl Hydroxy Ethyl Amine	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Dimethyl Polysiloxane	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Diphenyl	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	
NO		Diphenyl Oxide	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Ester Alcohol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Ether	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
	2-	Ethoxyethanol	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
0		Ethyl 3-ethoxy propionata	N/A	N/A	0.00	0.00		0.00	0.00	0.00%		
NO		Ethyl Aceto Acetate	N/A	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

2 of 3

EPA CODES:

. LOCATION : TOLEDO APD,

OHD-005041843 EPA [.D.#:

D001

**₽**003

CONTRACTOR'S CODE: WPS-29339

DUPONT CODE: WOT-07a

STATE: N/A

II. NAME OF WASTE: ACRYLONITRILE DRUKS W/DECONTAMINANT

Other non-listed constituents present		EPA WASTE CODE	E BPA WAST CODE	Watwirs co ning spent WASTE	solvents STD	All other spe solvent waste WASTE S	es CD			
NO	Ethyl Acrylate	N/A	N/A	0,00	0.00	0.00	0.00	0.00%	0.00	
NO	Ethyl Gly M-butyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
<b>N</b> O	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO.	Ethyl Gly M-ethyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Bthylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO.	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
<b>M</b> O .	Fo <b>rn</b> aldehyde	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	Server de la como e
NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Glycol Ethers	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
Ю	Heptane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
···)	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
	Hydrocarbon Solvent	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Isopropyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Lithium Hydroxide Monohydrate	-	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Methyl Methacryla	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Methyl-n-Amyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Monomer, free	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00	
NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Nitric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
,,,,	Phenols	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
	Phosphoric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Phthalate Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO	Polyisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%		
NO NO	Polyvinyl Chloride	N/A	N/A	0.00	0.00	0.00	0.00		0.00	

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

EPA I.D.:

EPA CODES:

L. LOCATION : TOLEDO APD,

OHD-005041843

D001

F003

0

CONTRACTOR'S CODE: WPS-29339

DUPONT CODE : WOT-07a

STATE: N/A

NAME OF WASTE: ACRYLONITRILE DRUNS W/DECONTAMINANT

	Other non-listed constituents present		BPA WASTE CODE	EPA WASTE	Wstwtrs co		All other	-		
					ning spent WASTE	STD	solvent w WASTE	STD		
NO			N/A	N/A	0,00	0.00	0.00	0.00	0.00%	0.00
MO	Ũ−	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Gly M-methyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propyl Glycol M-methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Propylene carbonate	N/A	N/A	0.00	0.00	0.00	. 0.00	0.00%	0.00
NO		Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
Ю		Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,1,	Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	1,1,2,	Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO	2,3,4,	Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
1	p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	2,4,5-	TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
MO		Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
NO		Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
YES		Water	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

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WASTE CHARACTERIZATION FORM (WCF)
                                               E. L. DUPONT DENEMOURS & CO.
                                                                                                                       DATE: October 19, 1990
    1 OF 1
                                                                                        CONTRACTOR'S CODE: WPS-29338
       LOCATION:
                      TOLEDO APD.
      EPA I.D.# :
                      OHD-005041843
                                                                                             DUPONT CODE: WOT-05a
      EPA CODES : N/A N/A
                            N/A N/A
                                               N/A N/A
                                                              N/A
                                                                     N/A
                                                                                 N/A
                                                                                                  O STATE : N/A
                      Bowthern" & Water
II.NAME OF WASTE:
III.
          COMPOSITION:
                                                                                            D. CONCENTRATION
       MAJOR
                                                              C.ONE TIME OR
                                                                                                               RANGE
                                                                                                                             B.EXPOSURE LIMITS
                                                                                              UPPER
     COMPONENTS
                                                                                                               LOWER
                                                                                                                               +ACGIH ++OSHA
                                                              TYPICAL ANALYSIS
      Diphenyl Oxide
                                                                           40.00%
                                                                                              40.00%
                                                                                                                4.00%
                                                                                                                             1.0ppm 0.2ppm
      Diphenyl
                                                                            5.00%
 · 2.
                                                                                               5.00%
                                                                                                               0.50%
                                                                                                                             1.0ppm 1.0ppm
      n/a
                                                                            0.00%
                                                                                               0.00%
                                                                                                               0.00%
  3.
                                                                                                                             n/a
                                                                                                                                     n/a
  4.
      n/a
                                                                            0.00%
                                                                                               0.00%
                                                                                                                0.00%
                                                                                                                             n/a
                                                                                                                                     n/a
  5.
      n/a
                                                                            0.00%
                                                                                               0.00%
                                                                                                                0.00%
                                                                                                                             n/a
                                                                                                                                     n/a
  6.
      Water
                                                                           55.00%
                                                                                              55.00%
                                                                                                               95.50%
                                                                                                                             n/a
                                                                                                                                     n/a
  B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPM)
                                                                                    DOBS THE WASTE CONTAIN:
            0.00 *Br
                            0.00 Co
                                           0.00
                                                 Pb
                                                         0.00 Ag
                                                                            0.00
                                                                                      SULFIDES:
                                                                                                                                AMT: N/A
            0.00
                  Cd
                            0.00
                                           0.00
                                                         0.00 Sr
                                                                           0.00
                                                                                      CYANIDES:
                                                                                                                                AMT: N/A
                                 Cu
            0.00
                            0.00 *F
                  Ce
                                           0.00
                                                 Hg
                                                         0.00 *S
                                                                            0.00
                                                                                         PCB'S:
                                                                                                    NO
                                                                                                                                AMT: N/A
            0.00 *C1
                           1* 00.0
                                          0.00 Ni
                                                         0.00 Tl
                                                                          0.00 PHENOLICS: NO
                                                                                                                                AMT: 0
            0.00 Cr
                                           0.00 *N
                            0.00 Fe
                                                         0.00 Sn
                                                                            0.00
                                                                                    INSEC'CIDES:
                                                                                                                                AMT: N/A
                                                *P
                                                                                                                                AMT: N/A
  Soluble Salts:
                            0.00
                                                         0.00
                                                              Zn
                                                                           0.00
                                                                                    PESTICIDES:
                                                                                                    NO
  OTHER:
                                 AMT:n/a
                                                 Se
                                                         0.16 Zr
                                                                            0.00
                                                                                    HERBICIDES:
                                                                                                    NO
                                                                                                                                AMT: N/A
                 none
                                                                                    RODEN'CIDES:
                                                                                                    NO
                                                                                                                                AMT: N/A
                                                                                                    NO
 SHOW TEST METHOD USED>
                                 EPTOX/TCLP:
                                                   TOT.METALS:
                                                                                                                                AMT: N/A
                                                                                       DIOXINS:
<sup>™</sup>. PHYS.STATE € 25*C (ENTER):
                                 LIQUID
                                                                            LISTED SOLVENTS:
                                                                                                    NO
                                                                                                                                AMT:
                                                                                                                                         0.00%
   IS THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED?
                                                           NO
                                                                         HALOGENS >1000Mg/L:
                                                                                                    NO
                                                                                                                                AMT:
                                                                                                                                         0.00
   *MULTI - PHASED?
                                                         VOL % OF EACH PHASE:
                                                                                               0.00% SOLID
                                                                                                                              100.00% LIQUID
   *CAN THE WASTE BE PUMPED?
                                         POURED?YES
                                                      XPREE FLOWING LIQUID LAYER:
                                                                                             100.00% VOLUME
   *PRESSURE OF CONTAINER:
                                 N/A
                                                          % SEPARATE PHASE WATER:
                                                                                          D
                                                                                                       ESTIMATED SPEC. GRAV: 1.00 +/- 0.1
٧.
                    SHIPPING CONTAINERS:
         BULK: T/W
                                 AMT:5000 GALS
                                                      MC CODE:
                                                                 304
                                                                                            APPROX WGHT
                                                     MTRL OF
                                                                                                                             CONTAINER
               TYPE
                                       SIZE
                                                  CONSTRUCTION
                                                                     DOT SPEC
                                                                                             PER CHTNR
                                                                                                                             LABEL USED
            DRUMS:
                      17H,17E
                                     55G
                                                   STEEL
                                                                     17H,17E
                                                                                                425
                                                                                                                             N/A
       OTHER SIZE:
                      N/A
                                    N/A
                                                   N/A
                                                                     N/A
                                                                                                                             N/A
                                                                                            N/A
                  PROPERTIES:
   FLASH POINT(CC):
                      >240F
                                                       BTU/LB:
                                                                   0
                                                                                                               CORROSIVE?
                                                                                                                             NO
            COLOR:
                      Clr/Milky Ph:
                                                                            ODOR: NO
                                                                                                    N/A
OSHA CARCINOGEN? NO
                                                    ASH CONTENT %:
                                                                            0.00%
TOXIC ?(EXPLAIN) NO
                             ERR
                                                                                 REACTIVE?
                                                                                                    n/a
   PYROPHORIC ? NO
                                                                                                     RADIOACTIVE?
                                                                                                                     NO
SHOCK SENSITIVE? NO
                                                    RXPLOSTVE?NO
                                                                                                     ETIOLOGICAL?
                                                                                                                     NO
OTHER? (EXPLAIN)
                      Not known
VII.
                                 D.O.T. SHIPPING INFORMATION
   D.O.T.SHIPPING NAME: NOT DOT REGULATED
                                                                                            N/A
                                                                                                    N/A
                                                                                                                             N/A
                                                              n/a
                                                                     N/A
                                                                                 N/A
                                                                                                             N/A
                                                                                                                     N/A
                                                                                                                                     N/A
   D.O.T. HAZARD CLASSIFICATION:
   D.O.T. PLACARD:
                                                      U.N.NO.:n/a
                      none
  D.O.T. LABEL:
                                                      N.A.NO.:n/a
                      none
VIII.
                      VOLUME:
   ANNUAL:
                                      THIS REQUEST: n/a
                                                                                     PER SHIPMENT:
                                                                                                             10 drs
             REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)
     NOTE #1:
                 MSDS's for ingredients attached
    NOTE #2:
                 n/a
     NOTE #3:
                 n/a
    NOTE #4:
                 n/a
```

PREPARED BY:

A. PARCHOMENKO

Disposal Site & Address):Ross Incineration Services,	Inc. * 394 Giles Rd. * Grafton, OH 44044	* (216)748-2171 EPA ID	O.NO.: OHD 048415665	
MANIFEST NUMBER:NAME OF WASTE: Dowther	er <b>a" &amp; W</b> ater E	PA CODES: N/A N/A N/A N/A	N/A	N/A 0
•	le Rd.,Toledo, OH 43613 (Ph.419-478-1211) MASTE CODE: WOT-05a	CON		WPS-29338 N/A
XXX 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA RECULAT  2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WAST THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SU  4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 4 PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RE TREATMENT STANDARDS ARE AS FOLLOWS:	TE THAT HAS BEEN PRETREATED AND MEETS THE BBJECT TO A NATIONAL CAPACITY VARIANCE O CFR PART 268. IN ACCORDANCE WITH 40 CFR	OR CASE-BY-CASE EXTE 268.7. I, AS THE GENERAT	ENSION! OR HEREBY	

#### IS THIS WASTE A WASTEWATER ?: NO

	RESTRICTED SOLVENTS PRESENT IDENTIFY		STE BPA WASTE CODE	Conc Wstwtrs co	entration	(mg/l) All other		CALIFORNIA LISTE	ED CONSTITUE	NTS PRES	ENT		
	PPLI							Constituent Name	in the end			Treatment vStandard	Mark All Applicable
NO	Acetone	N/A	N/A	0.00	0.050	0.0	0.590	Arsenic	NA		500	None	NO
NO	Benzene .	N/A	N/A	0.00	0.070	0.0	3.700	Cadmium		0	100		NO
NO	n-Butyl alcohol	N/A	N/A	0.00	5.000	0.0	5.000	Chromium(CrVI)		0	500	•	NO
110	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000		NO
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	•		0	500		NO
NO	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Hercury	NA	0	20	None	NO
NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0		Nickel		0	134	None	NO .
NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0.163			NO
NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0		Thallium		0		None	NO
	Cyclohexanone	N/A	N/A	0.00	0.125	0.0		Liquids w/PCB's		N/A		Incinr'tn	NO
NO	2,4-D	N/A	N/A	0.00	0.000	0.0		Liquids w/ HOC's	;			Incinr'tn	NO
NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0		Solids w/ HOC's		N/A		gIncinr'tn	NO
NO	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0		*Halogenated org	anic compou	-			
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000		,				
NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000						
NO	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000						
NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.020						
NO	Ethoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin						
NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750						
NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053						
NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750						
NO	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000						
	Hexachloro-1,3-butadien		N/A	0.00	0.000	0.0	0.000						
NO	Hexachlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000						
NO	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000						
NO	Isobutanol	N/A	N/A	0.00	5.000	0.0	5.000						
NO	Lindane	N/A	N/A	0.00	0.000	0.0	0.400						
NO.	Methanol	N/A	N/A	0.00	0.250	0.0	0.750						

G

isposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171

EPA ID.NO.:

OHD 048415665

1 268.41.3(a)

5 268.41,3(a)

NO

MANIFEST NUMBER: NAME OF WASTE: Dowtherm" & Water EPA CODESN/A N/A N/A N/A N/A N/A N/A 0 N/A CONTRACTOR'S CODE : FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) WPS-29338 OHIO EPA CODE: DUPONT RPA I.D.#: OHD-005041843 DUPONT WASTE CODE: WOT-05a N/A NO Methoxychlor N/A N/A 0.00 0.000 0.0 10.000 Waste Code Description &, (Mg/L) NO Methyl ethyl ketone N/A N/A 0.00 0.050 0.750 or Treatment Subcategory 0.0 Reg.Lev. NO Methyl isobutyl ketone N/A N/A 0.00 0.050 0.0 0.330 N/A 0.960 D001: Wstwtrs(<1.0 wt% TOC & TSS)<1.0% NO Methylene chloride N/A 0.00 0.200 0.0 268.42(a)DEACT NO Methylene chloride(PharmN/A N/A 0.00 0.440 0.960 D001: Low TOC Liq. (<10 wt% TOC) <10% 268.42(a)DEACT 0.0 N/A 0.125 D001: NO Nitrobenzene N/A 0.00 0.650 0.0 Hi TOC Lig.(>10 wt% TOC) >10% 268.42(a) RORGS NO NO 2-Nitropropane N/A N/A 0.00 Incin/Cho 0.0 0.000 D001: 268.42(A)FSUBS NO n/a NO Pentachlorophenol N/A N/A 0.00 0.000 0.0 0.000 D001: 268.42(A)INCIN n/a NO Pyridine Ň/A 0.330 D002: N/A 0.00 1.120 0.0 Corr, all subcat's & CA list 268.42(a)DEACT n/a NO Tetrachloroethylene N/A N/A 0.00 0.079 0.0 0.050 D003: Reactive 268.42(a) DEACT NO n/a NO Toluene N/A W/A 0.00 1.120 0.0 0.330 D004: Arsenic (As) 5 268.41.3(a) VARIENO NO Toxaphene N/A N/A 0.00 0.000 0.0 0.500 DO05: Barium (Ba) 100 268.41,3(a) NO NO 2,4,5-TP (Silvex) N/A N/A 0.00 0.000 0.0 1.000 D006: Cadmium (Cd) 1 268.41,3(a) NO NO 1,1,2-T-chloro-1,2,2-t-fN/A N/A 0.062 0.091 D007: 0.00 0.0 Chromium (Cr) 5 268.41,3(a) NO NO 1,1,1-Trichloroethane N/A N/A 0.00 0.030 0.0 7.600 D008: Lead batteries NO n/a 268.41,3(a) 0.00 NO 1,1,2-Trichloroethane N/A N/A 0.030 0.0 7.600 D008: Other lead (Pb) 5 268.41,3(a) NO. N/A "O Trichloroethylene N/A 0.00 0.062 0.0 0.091 D009: Wstwtrs(<1.0 wt% TOC & TSS) 0.2 268.41,3(a) VARIENO Trichlorof luoromethane N/A N/A 0.00 0.050 0.960 D009: Low Nonwstwtr (<260ppm Hg) 0.2 268.41,3(a) VARIBNO 0.0 mO 2.4.5-Trichlorophenol N/A N/A 0.00 0.000 0.0 0.000 D009: Hi Nonwstwtr(>=260ppm Hg) 0.2 268.41,3(a)RMBRCNO NO 2,4,6-Trichlorophenol 0.000

The above information is based upon ( ) an attached waste analysis or (XXX) generator knowledge of the waste streams.

0.000

0.050

0.00

0.00

0.00

I believe the above information is true, accurate, and complete.

N/A

N/A

N/A

N/A

N/A

N/A

NO Vinvl chloride

NO Xylene

G

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis & testing or through knowledge of the waste to support this certification so as to comply with all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Sec. 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine or imprisonment.

0.0

0.0

0.0

0.000 D010:

0.000 D011:

0.150

Selenium (Se)

Silver (Ag)

Name and Title of Signatory:	
Signature of Generators Representative:	Date:

N/A

1 of 3

. LOCATION : TOLEDO APD,

OHD-005041843 EPA I.D.#:

N/A N/A EPA CODES:

CONTRACTOR'S CODE: WPS-29338 DUPONT CODE: WOT-05a

N/A

N/A

STATE : N/A

N/A II. NAME OF WASTE: Dowtherm" & Water

N/A

N/A

	0the	r identified	EPA	WASTE	BPA WASTE	Conc	entration (	mg/1)						
		tituents present	CO		CODE	Wstwtrs co	-		All other	spent				
		•				ning spent	solvents		solvent w		Level(	fg/L)		
						WASTE	STD		WASTE	STD	Conc'n.R			
==:	====== NO	Acetic Anhydride	=====	: 0	N/A	0.00	0.00		0.00	0.00	0.00%	0.00	:=====	======
	NO	Acrylic Acid			N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO	Acrylonitrilre			N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Aliphatic Hydrocarbon	N/A	_	N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO	Aluminum Oxide	-,	0	N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Annonia.			N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Amyl Acetate	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO p-	Benzoquinone	,		N/A	0.00	0.00		0.00	0.00		0.00		
	NO Ô	_	N/A		N/A .	0.00			0.00	0.00	0.00%			
	10 n-	Butyl acetate	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO	Butyl Acetate	N/A		N/A	0.00	0.00		0.00	0.00		0.00		-
	NO	Butyl Acrylate	,		N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Butyl Aldehyde, Oxide	N/A	•	N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Butyl Benzyl Phthalate	,	0	N/A	0.00	0.00		0.00	0.00		0.00		
	10	Butyl Catechol, tertiary	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	t-	Butyl Peroxy	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
1	NO .	Butyl Peroxy Acetate	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	NO	Butylene Glycol	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	10	Butyrol Acetone	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	NO.	Calcium	,		N/A	0.00	0.00		0.00	0.00		0.00		
	NO	CRESOLS		BRR		0.00	0.00		0.00	0.00	0.00%	0.00		
	NO.	Cyclohexyl Amine	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	NO 2,4-		14, 11		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	<b>N</b> O	D-ethyl Gly M-butyl E-Acetate	N/A	·	N/A	0.00	0.00		0.00	0.00		0.00		
	<b>V</b> O	D-ethyl Gly M-butyl Ether	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	NO	D-ethyl Gly Methyl Ether	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	v0	Diacetone Alcohol	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO	Dibasic esters	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	10	Dibutyl Phthalate	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	NO.	Dibutyltin Dilaurate	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
		o-Dichlorobenzene	N/A		N/A	0.00	0.00		0.00	0.00	0.00%	0.00		
	40 GI UI	Diethyl Amino Ethanol	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	<b>V</b> O	Diisobutyl Ketone	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	 √0 n,n-		N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	10 n,n 10	Dimethyl Hydroxy Bthyl Amine	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	10	Dimethyl Polysiloxane	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	10	Diphenyl	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	10	Diphenyl Oxide	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	<b>1</b> 0	Ester Alcohol	N/A		N/A	0.00	0.00		0.00	0.00		0.00		
	<b>1</b> 0	Rther	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	10 10 2-	Ethoxyethanol	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	0	Ethyl 3-ethoxy propionata	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
	10	Ethyl Aceto Acetate	N/A		N/A	0.00	0.00		0.00	0.00	0.00%			
r	•••	noult notes netrate	III I		u/ tr	0.00	0.00		V.VV	v. vv	U 1 V V A	V • VV		

OTHER CONSTITUENTS PRESENT (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

2 of 3

.. LOCATION : TOLEDO APD,

OHD-005041843 EPA I.D.#:

N/A N/A N/A N/A N/A N/A N/A N/A

CONTRACTOR'S CODE: WPS-29338

DUPONT CODE: WOT-05a STATE: N/A

EPA CODES:

II. NAME OF WASTE: Dowthern" & Water

constituents present CODE CODE Wistwirs contai- All other spaning spent solvents solvent waste STD WASTE STD	
NO Bthyl Acrylate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Ethyl Gly M-butyl B-Acetate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Ethyl Gly M-butyl Ether N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Ethyl Gly M-ethyl B-Acetate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Ethylene Glycol N/A N/A 0.00 0.00 0.00	0.00 .0.00% 0.00
NO Ethylene Glycol N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Bthylhexyl Alcohol N/A N/A · 0.00 0.00 0.00	0.00 0.00% 0.00 .
NO Formaldehyde N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Furfuryl Alcohol N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Glycerin N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Glycol Ethers N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Heptane N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Hexane N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
Hexylene Glycol N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
Hydrocarbon Solvent N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Isobutyl Acetate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Isophorone N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Isopropyl Alcohol N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Lithium Hydroxide Monohydrate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methacrylic Acid N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methane Sulfonic Acid N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl Acrylate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl ethyl acetate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl Rthyl Ketoxime N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl Methacryla N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl-2-Pyrrolidone N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Methyl-n-Amyl Ketone N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Mineral Spirits N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Mineral Spirits N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Monomer, free N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Naphtha N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Naphtha N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Nitric Acid N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Nitrobenzene N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Nitromethane N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Nitropropane N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Octanes N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Octyl Phenol Polyeth Alc N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Petroleum Bther N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
O Phenols N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
0 Phosphoric Acid N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Phthalate Anhydride N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Polychlorinated Biphenyls N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Polyisocyanate N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00
NO Polyvinyl Chloride N/A N/A 0.00 0.00 0.00	0.00 0.00% 0.00

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

3 of 3

EPA I.D.#: EPA CODES:

. LOCATION : TOLEDO APD,

NAME OF WASTE: Dowtherm" & Water

OHD-005041843

N/A

N/A

N/A

N/A

N/A

0.00

0.00

0.00

0.00

0.00% 0.00

N/A N/A

N/A N/A

N/A

CONTRACTOR'S CODE: WPS-29338

DUPONT CODE: WOT-05a

STATE: N/A

	er non-listed stituents present	EPA WASTE CODE	EPA WASTE CODE	Conc Wstwtrs co ning spent WASTE		All other solvent wa WASTE	•		
)	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
) n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
}	Propyl Gly M-methyl E-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Propyl Glycol M-methyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Propylene carbonate	N/A	N/A	-0.00	0.00	0.00	0.00	0.00%	0.00
)	Propylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
1,1	,1,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	,2,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
2,3	4,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
<b>p</b> -	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
2,4	5-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
)	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

NO

Water

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WASTE CHARACTERIZATION FORM (WCF)
                                           E.I.DUPONT DENEMOURS & CO.
                                                                                                              DATE: October 19, 1990
n400 1 OF 1
                                                                                  CONTRACTOR'S CODE:
       LOCATION:
                    TOLEDO APD.
                    OHD-005041843
                                                                                      DUPONT CODE: WOT-18
      EPA I.D. :
      EPA CODES: DOOZ, DOOZ.
                                                                                            STATE: N/A
                    GLYCIDYL METHACRYLATE
II.NAME OF WASTE:
III.
          COMPOSITION:
                                                         C.ONE TIME OR
                                                                                     D. CONCENTRATION RANGE
                                                                                                                   E.EXPOSURE LIMITS
       MAJOR
                                                                                       UPPER
     COMPONENTS
                                                         TYPICAL ANALYSIS
                                                                                                      LOVER
                                                                                                                     +ACGIH ++OSHA
 1. Glycidyl Methacryalate
                                                                  100.00%
                                                                                   100.00
                                                                                                  10000
                                                                                                                   2 ppm none
  2.
 3.
  4.
 5.
 B. TABLE OF ALL COMPONENTS INCLUDING MAJORS LISTED ABOVE (IN PPM)
                                                                             DORS THE WASTE CONTAIN:
                                                                                                                          Mg/L
                                                                                                                      AMT: N/A
           0.00 *Br
                          0.00 Co
                                       0.00 Pb
                                                     0.00 Ag
                                                                      0.00
                                                                               SULFIDES:
                                                                                            NO
                                                                                CYANIDES:
                                                                                                                      AKT: N/A
 As
           0.00 Cd
                          0.00 Cu
                                       0.00
                                             Mn
                                                     0.00 Sr
                                                                     0.00
                                                                                            NO
                                                                                                                      AMT: N/A
 Ba
           0.00 Ce
                          0.00 *F
                                       0.00
                                             Hg
                                                     0.00 *S
                                                                    0.00
                                                                                  PCB'S:
                                                                                                                      AMT:
           0.00 *Cl
                          1* 00.0
                                       0.00 Ni
                                                     0.00 Tl
                                                                    0.00
                                                                               PHENOLICS:
                                                                                            NO
                                                                                                                              0.00%
 Ве
                                                               0.00
           0.00 Cr
                                       0.00 *N
                                                                             INSEC'CIDES:
                                                                                                                      AMT: N/A
 Bi
                          0.00 Fe
                                                     0.00 Sn
                                            ‡P
                          0.00
                                                     0.00 Zn
                                                                    0.00
                                                                                                                      AMT: N/A
 Soluble Salts:
                                                                              PESTICIDES:
 OTHER:
                              AMT:n/a
                                             Se
                                                     0.00 Zr
                                                                      0.00
                                                                              HERBICIDES:
                                                                                                                      AMT: N/A
                none
                                                                                            NO
                                                                                                                      AMT: N/A
                                                                             RODEN'CIDES:
 SHOW TEST METHOD USED>
                              EPTOX/TCLP:
                                            TOT METALS:
                                                                                DIOXINS:
                                                                                            NO
                                                                                                                      AMT: N/A
                                                                                            NO
                                                                       LISTED SOLVENTS:
                                                                                                                      AHT:
                                                                                                                              0.00%
IV. PHYS.STATE @ 25*C (ENTER): LIQUID
    S THERE A DUSTING HAZARD IF CONTAINERS ARE OPENED? NO
                                                                   HALOGENS >1000Mg/L:
                                                                                            NO
                                                                                                                      AMT:
                                                                                                                              0.00
                                                                                        0.00% SOLID
                                                                                                                    100.00% LIQUID
    ULTI - PHASED? NO
                                                     VOL % OF EACH PHASE:
                                                                                  100.00% VOLUMB
  *CAN THE WASTE BE PUMPED?
                              YES
                                     POURED?YES XFREE PLOWING LIQUID LAYER:
                                                                                   0
                                                                                               ESTIMATED SPEC. GRAV: 1.00 +/- 0.1
  *PRESSURE OF CONTAINER:
                                                  % SEPARATE PHASE WATER:
                  SHIPPING CONTAINERS:
         BULK: n/a AMT:n/a
                                                  MC CODE:n/a
                                                                                     APPROX WGHT
                                                 MTRL OF
                                                                                                                   CONTAINER
                                              CONSTRUCTION
                                                               DOT SPEC
                                                                                      PER CHTHR
              TYPE
                                    SIZE
                                                                                                                   LABEL USED
           DRUKS:
                    17H.17E
                                  55G
                                               STEEL
                                                               17H.17E
                                                                                      425
                                                                                                                   N/A
       OTHER SIZE:
                    N/A
                                  N/A
                                               N/A
                                                               N/A
                                                                                     N/A
                                                                                                                   N/A
           PROPERTIES:
                                                                                                      CORROSIVE?
                                                                                                                  YE2
  PLASE POINT(CC):
                                                   BTU/LB: 1100
                                                                      ODOR: NO
           COLOR:
                    Milky
                              Ph:
                                                  11
                                                                                            n/a
                                                ASH CONTENT %:
                                                                      0.00%
OSHA CARCINOGEN? NO
TOXIC ?(EXPLAIN) NO
                                                                          REACTIVE? YES
                                                                                            n/a
   PYROPHORIC ? NO
                                                                                             RADIOACTIVE?
                                                                                                           NO
SHOCK SENSITIVE? NO
                                                EXPLOSIVE?NO
                                                                                             ETIOLOGICAL?
OTHER? (EXPLAIN)
                     Not known
                              D.O.T. SHIPPING INFORMATION
VII.
  D.O.T.SHIPPING NAME:
  D.O.T. HAZARD CLASSIFIC ***ION:
  D.O.T. PLACARD:
                                                  U.N.NO.:
  D.O.T. LABEL:
                                                  N.A.NO.:N/A
VIII.
                    VOLUME:
  ANNUAL:
               100 DRS.
                                   THIS REQUEST: N/A
                                                                               PER SHIPMENT:
                                                                                                    40 DRS.
            REMARKS: (TREATMENT OF SPILLS/ SAFETY SUGGESTIONS/ MSDS)
    NOTE #1:
               MSDS's for ingredients attached
    NOTE #2:
    NOTE #3:
                n/a
    NOTE #4:
                n/a
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PREPARED BY:

A. PARCHOHENKO

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isposal Site & Address): Ross Incineration Services, Inc. \* 394 Giles Rd. \* Grafton, OH 44044 \* (216)748-2171 EPA ID.NO.: OHD 048415665 GLYCIDYL HETHACRYLATE DRUHS, W/DECONTAMINANT EPA CODES: DOOR, DOOR MANIFEST NUMBER: NAME OF WASTE: FROM LOCATION & ADDRESS: TOLEDO APD, 1930 Tremainsville Rd., Toledo, OH 43613 (Ph.419-478-1211) CONTRACTOR'S - CODE: DUPONT WASTE CODE: WOT- 18 OHIO EPA CODE : DUPONT EPA I.D.#: OHD-005041843 N/A 1. THIS WASTE IS NOT HAZARDOUS UNDER U.S.EPA REGULATIONS (40 CFR PART 261) ! XXX 2. THIS WASTE IS A CHARACTERISTICALLY HAZARDOUS WASTE THAT HAS BEEN PRETREATED AND NEETS THE LAND DISPOSAL RESTRICTIONS STANDARDS! THIS WASTE IS A LAND DISPOSAL RESTRICTED WASTE SUBJECT TO A \_\_\_ NATIONAL CAPACITY VARIANCE OR \_\_\_ CASE-BY-CASE EXTENSION! 4. THIS WASTE IS DETERMINED TO BE RESTRICTED UNDER 40 CFR PART 268. IN ACCORDANCE WITH 40 CFR 268.7. I, AS THE GENERATOR HEREBY PROVIDE NOTICE THAT THE WASTE IS LAND DISPOSAL RESTRICTED REQUIRING TREATMENT. THE EPA WASTE CODES AND THE APPROPRIATE

IS THIS WASTE A WASTEWATER ?: NO

TREATMENT STANDARDS ARE AS FOLLOWS:

RESTR IDENT ALL A		EPA WAS	TE EPA WASTE CODE	Con Wstwtrs coning spen		All oth	er spent wastes	CALIFORNIA LISTEI Constituent	) CONSTIT		NT (Mg/L) Treatment	. Mark All
CABLE		Spent S	olvents	WASTE		WASTE	STD	Name			Reg.LevStandard	Applicable
NO	Acetone	N/A	N/A	0.00	0.050	0.0	0.590	Arsenic	NA	0	500 None	NO
NO	Benzene	N/A	N/A	0.00	0.070	0.0	3.700	Cadmium		0	100	МО
NO	n-Butyl alcohol	N/A	N/A	0.00	5.000	0.0	5.000	Chromium(CrVI)		0	500	NO
NO	Carbon disulfide	N/A	N/A	0.00	1.050	0.0	4.810	Cyanide		N/A	1000	NO
	Carbon tetrachloride	N/A	N/A	0.00	0.050	0.0	0.960	Lead		0	500	NO
	Chlordane	N/A	N/A	0.00	0.050	0.0	0.030	Kercury	NA	0	20 None	NO
NO	Chlorobenzene	N/A	N/A	0.00	0.150	0.0		Nickel		0	134 None	NO
NO	Chloroform	N/A	N/A	0.00	0.000	0.0	0.000	Selenium		0	100	NO
NO	Cresols,o,m,p(cresylic	aN/A	N/A	0.00	2.820	0.0	0.750	Thallium		0	130 None	NO
NO	Cyclohexanone	N/A	N/A	0.00	0.125	0.0	0.750	Liquids w/PCB's		N/A	50 Incinr'tn	NO
NO	2,4-D	N/A	N/A	0.00	0.000	0.0	10.000	Liquids w/ HOC's		0	0.99% Incinr'tn	NO
NO	1,2-Dichlorobenzene	N/A	N/A	0.00	0.650	0.0	0.125	Solids w/ HOC's		N/A	>1000mgIncinr'tn	NO
NO	1,4-Dichlorobenzene	N/A	N/A	0.00	0.000	0.0	0.000	*Halogenated orga	nic comp	ounds.		
NO	1,2-Dichloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
NO	1,1-Dichloroethylene	N/A	N/A	0.00	0.000	0.0	0.000					
Ю	2,4-Dinitrotoluene	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Endrin	N/A	N/A	0.00	0.000	0.0	0.020					
NO	Ethoxyethanol	N/A	N/A	0.00	Inci/Bio	0.0	Incin					
NO	Ethyl acetate	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Ethyl benzene	N/A	N/A	0.00	0.050	0.0	0.053					
NO	Ethyl ether	N/A	N/A	0.00	0.050	0.0	0.750					
NO	Heptachlor (& its hydro	xN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachloro-1,3-butadien	eN/A	N/A	0.00	0.000	0.0	0.000					
NO	Hexachlorobenzene	N/A	n/a	0.00	0.000	0.0	0.000					
МО	Hexachloroethane	N/A	N/A	0.00	0.000	0.0	0.000					
NO	Isobutanol	N/A	N/A	0.00	5.000	0.0	5.000					
NO	Lindane	N/A	N/A	0.00	0.000	0.0	0.400					
NO	Methanol	N/A	N/A	0.00	0.250	0.0	0.750					

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E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

PLOE 2 of 3

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LOCATION: TOLEDO APD, OHD-005041843 EPA I.D.#:

EPA CODES: 3002,3003

II. NAME OF WASTE: GLYCIDYL METHACRYLATE DRUMS, W/DECONTAMINANT

CONTRACTOR'S CODE :

DUPONT CODE: WOT-18

STATE: N/A

	Other non-listed constituents present		EPA WASTE	E EPA WASTE CODE	Conc. Wstwtrs co	entration (mg/l)	All other sp	nnt.		
	const	ituents present	CODE	3000	ning spent WASTE		solvent wast			
=	NO	Ethyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Ethyl Gly M-butyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Ethyl Gly M-butyl Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Ethyl Gly M-ethyl B-Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Bthylene Glycol	N/A	N/A	0.00	0.00	- 0.00	0.00	0.00%	0.00
	NO	Ethylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Ethylhexyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Formaldehyde	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Furfuryl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Glycerin	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Glycol Ethers	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Heptane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Hexane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Hexylene Glycol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	•	Hydrocarbon Solvent	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
		Isobutyl Acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Isophorone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Isopropyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Lithium Hydroxide Monohydrate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methacrylic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methane Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl Acrylate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl ethyl acetate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl Ethyl Ketoxime	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl Methacryla	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl-2-Pyrrolidone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Methyl-n-Amyl Ketone	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Mineral Spirits	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Monomer, free	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	CM	Naphtha	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Nitric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Nitrobenzene	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Nitromethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Nitropropane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Octanes	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Octyl Phenol Polyeth Alc	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Petroleum Ether	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
.er	NO	Phenols	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	η.	Phosphoric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	w	Phthalate Anhydride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Polychlorinated Biphenyls	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Polyisocyanate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	
	NO	Polyvinyl Chloride	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00

WASTE CHARACTERIZATION FORM (WCF)

E.I.DUPONT DENEMOURS & CO.INC.

DATE: October 19, 1990

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OCATION: TOLEDO APD, EPA I.D.#: OHD-005041843

EPA CODES: DOOZ, DOO3

NAME OF WASTE: GLYCIDYL METHACRYLATE DRUMS, W/DECONTAMINANT

CONTRACTOR'S CODE: WPS-DUPONT CODE : WOT-18

STATE: N/A

		her non-listed nstituents present	EPA WASTE CODE	EPA WASTE CODE	Conc Wstwtrs con ning spent WASTE		All other solvent w WASTE	-		
	NO	Propyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO n-	Propylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propyl Gly M-methyl R-Acetate		N/A	9.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propyl Glycol M-methyl Ether		N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propylene carbonate	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Propylene Glycol	N/Á	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Silica	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Silicon	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Styrene Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Sulfuric Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 1,1	,1,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 1,1	1,2,Tetrachloroethane	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO 2,3	3,4,Tetrachlorophenol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO p-	Toluene Sulfonic Acid	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
6	2,4	1,5-TP (Silvex)	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
(		Tri (2-hydroxyethyl) amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethanol Amine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Triethylamine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Turpentine	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Vanadium	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	MO	Vinyl Acetate Monomer	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
	NO	Vinyl Alcohol	N/A	N/A	0.00	0.00	0.00	0.00	0.00%	0.00
Y!	ES	Water	N/A	N/A	0.00	0.00	0.00	0.00	0.57%	0.00

#### D. PROCESS INFORMATION

The HAZARDOUS WASTE storage facilities at this site involve only containers and tanks. No waste piles, impoundments, incinerators, landfills or [other treatment] disposal operations are present.

Thus, this section will consist [only] of D-1, D-2 AND D-3.

#### <u>D-1.</u> Containers

No changes are being made to the hazardous waste container storage facilities as part of these modifications.

#### D-la. Containers with Free Liquids

Only WCFs Nos., WOT-3, & WOT-15 are classified as having no free liquids. WOT-3 BEING A RCRA HAZARDOUS WASTE, WHILE WOT-15 IS A NON-RCRA WASTE. All others are in this category, including those spent solvents normally kept in tanks but occasionally temporarily kept in drums and Portable Tanks (prior to pumping into the tank system).

#### D-la(1). Description of Containers OAC 3745-55-71 & 72

The containers used for the hazardous waste storage facility's primary containment are all DOT-approved shipping containers for the paint-type materials. The two major types used are:

\* 55-gallon steel drums (open and closed head types) and 5-gallon steel pails (open and closed head types). Both new and reconditioned (per DOT approved procedures) drums are used. These containers are selected to meet DOT specifications and represent years of experience in shipping similar hazard

classification finished product.

\* Portable tanks (275 to 550 gallon working capacity). These tanks range in size from 42"x42"x40" high to 48"x48"x75" high standing on their own legs (with allowance for fork truck lifting). Solvent-based paints and paint ingredients have been handled, stored, and shipped in containers of these constructions for decades with no evidence of internal corrosion or other degradation of the metals. Lined containers are not used.

The portable (stainless steel or aluminum) tanks stand 8" off the ground and are not in contact with any surface water. The drums and pails are all stored exclusively on pallets (5" high) and are along the highest elevation edge of the sloped storage pad (away from drains).

All containers are stenciled with type and source of waste (which area generated), except portable tanks, which use a card in a metal holder. Material in portable tanks is either for recovery on-site or to be pumped into tank wagons for bulk shipment offsite. All portable tanks, drums or pails have an orange hazardous waste label -which includes the wording of Section 262.32(b) - placed on them when SHIPPED [put into storage] (see sample on next page). A strapped pallet of pails may have only one hazardous waste label per side.

DURING THE NORMAL COURSE OF A YEAR APPROXIMATELY 5 PORTABLE
TANKS, 60 DRUMS, AND 30 (1 PALLET) OF 5 GALLON PAILS COULD BE
STORED IN THE DESIGNATED HAZARDOUS WASTE STORAGE AREA AT ANY ONE
TIME.

THE CONTAINER STORAGE AREA IS LONG AND NARROW, ALLOWING US TO PLACE THE CONTAINERS OR PALLETS 2 DEEP AGAINST THE RETAINING CURB. THERE ARE NO SPECIFIC SPOTS DESIGNATED FOR PORTABLE TANKS, DRUMS, OR PAILS. 550 AND 440 GALLON PORTABLE TANKS ARE STORED SINGLE HEIGHT, WHILE 275 GALLON PORTABLE TANKS ARE STORED 2 HIGH AND DRUMS ARE STORED 3 PALLETS HIGH.

Sample of hazardous waste label applied to all containers[in storage] WHEN SHIPPED. SEE ATTACHMENT D-1a(1)

#### D-la(2). Container Management Practices OAC 3745-55-73

Because of the ignitable and volatile characteristics of almost all of the materials on the site, keeping process equipment and containers closed, except for filling and emptying, is a universal plant practice. Prevention of accumulations of organic vapors is a prime concern in all paint plants. No drums or portable tanks are moved from the point of filling without all bungs and heads tightly secured (to DOT standards for shipping). Drums are palletized and moved by fork lift truck. Hazardous wastes are marked for type and source (generating area) of waste and the orange waste labels affixed as described in D-la(1).

Pallets of HW are placed in the diked storage against the curb line, two pallets deep & three high (aisle markings are clear to the fork truck operator). THE OPEN TRAFFIC AISLE IN FRONT OF THE HW STORAGE ROW IS 15 'WIDE. This placement allows observation of the pallet stack from both sides during WEEKLY [daily] inspections. One fork truck at a time operates in the area to reduce the chance of accidents. All containers are dated at time of entering the

HAZARDOUS WASTE storage area. Generally, as soon as an economical load destined for a particular contract disposer has been accumulated, the arrangements are made for prompt shipment. However, all stored HAZARDOUS WASTES are shipped to disposers within one year as required. HAZARDOUS WASTE CONTAINERS ARE NOT STORED WITHIN 50 FEET OF THE SITE'S PROPERTY LINE. SEE ATTACHMENT B-2a(1).

## <u>D-1a(3).</u> <u>Secondary Containment System Design and Operation</u> OAC 3745-55-75

The hazardous waste storage area for containers is located on the East side of a large pad originally constructed to hold ignitable liquid (finished products) containers. The pad is 310 'by 112' & the portion designated for hazardous waste is 310' by [15] 10'. The attached drawings show the pad area, elevation of curbing, drainage system, retention basin, & outlet valve. Access by fork truck is on down sloping ramps.

SEE ATTACHMENT NOS. D-1a(3)-1 THRU -3.

# D-1a(3)(a). Requirement for the Base to Contain Liquids OAC 3745-55-75(B)(1)

The base is concrete, crack & gap free, about 8" thick, & sloped to a series of drains. The concrete curbing ranges from 6"-12" high (higher where pad slopes downward than at the ends). The hazardous wastes stored on the pad (as are the finished products) are composed largely of organic solvents which have no corrosion or chemical effect on the concrete. The amount of organic solvent migration through the base would be minimal in light of the short

period of exposure (daily surveillance [and inspection]).

THE DESIGNATED HAZARDOUS WASTE CONTAINER STORAGE PAD MEETS THE REQUIREMENTS OF OAG CHAPTER 3745-55-75(B)(1).

#### D-1a(3)(b). Containment System Drainage

As indicated in D-la(1), all containers are on 5" high wooden pallets except the portable tanks (stainless steel or aluminum), which have 8" legs. This dunnage (or metal legs), combined with the slope toward the drains, will insure that the containers will not be in contact with rain water or possible hazardous waste leakage.

SEE ATTACHMENT NOS. D-la(3)-1 THRU -3.

# D-1a(3)(c). Containment System Capacity OAC 3745-55-75-(B)(3)

From the attached drawings, the volume of liquid which can be contained on the pad behind retention basin release valve is 424,000 gallons. The MAXIMUM AMOUNT OF hazardous waste THAT COULD BE storED [age capacity] in its designated area is 56,000 gallons. The secondary containment system will hold 757% of the maximum hazardous waste gallonage, thus well exceeding the 10% requirements of OAC 3745-55-75(B)(3) [40 CFR 264.175(a)(3)]. A safety factor in this system is the almost impossible probability that the worst accident could rupture and release the contents of ALL [102] hazardous waste [drums] CONTAINERS at once ([10%] 100% of total hazardous waste CONTAINERS - 6200 GALLONS [drums]).

SEE ATTACHMENT NOS. D-1a(3)-1 THRU -3.

<u>D-1a(3)(d)</u>. <u>Control of Run-On</u> OAC 3745-55-75(B)(4)

Very little rain will run onto the pad due to the curbing around most of the pad and relatively flat roadways on two sides where the sloping ramps for fork truck access are located. As the figures in D-la(3)(c) indicate, there is adequate excess capacity for any precipitation - direct or run-on.

SEE ATTACHMENT NOS. D-1a(3)-1 THRU -3.

D-1a(3)(e).

OAC 3745-55-75(B)(5)

SEE ATTACHMENT NOS. D-1a(3)(e)-1 AND -2.

#### D-1a(4). Removal of Liquids from Containment System

With the retention basin outlet valve closed, any precipitation - even assuming no leaks of hazardous waste or finished product - will cause a build up of water in the drainage system. Area Operating Procedure (AOP) No. 655.000, which outlines how to sample and evaluate this accumulated water before release, is attached. The key points are:

- \* Level checks to be made:
  - Every Friday to insure minimal amount in retention basin to start weekend.
  - After every major storm.
- \* Sample near surface.
- \* Pour sample into a glass jar and allow to sit 5 minutes.
- \* Observe for:
  - Odor of solvents, resins, paints
  - Phase separation (organics on top)
  - Cloud from partially miscible organics

- Coloration due to pigmentation.
- \* If any indication of organics is present, take sample to lab and run gas chromatogram for toluene, xylene and acetone.
- \* If no organics are indicated, release to sewer and <u>immediately</u> <u>close</u> the valve.
- \* Record observations and release on operating record log (sample attached).
- \* If the water contains significant amounts of organics, the site [Solid Waste] ENVIRONMENTAL Coordinator and Plant [Engineering] SUPPORT Superintendent must decide on appropriate disposal depending on concentration and identity found in the lab test:

#### USING PORTABLE PUMPS:

- Pump out to PROCESS WASTE WATER PRETREATMENT STORAGE TANK
  [POTW] WITHIN 24 HOURS; or
- Pump TO TANK WAGON(S) [out] for SHIPMENT TO incineration off-site WITHIN 24 HOURS.

#### <u>D-1b.</u> Containers Without Free Liquids OAC 3745-55-71 THRU 75

A few waste streams can be considered without free liquid (WCF Nos. WOT- 3, & 15). However, they are subject to the same storage conditions on the same pad and no difference in storage management is warranted. [However, the disposal of these containers is allowed in secure chemical landfills without further treatment by the disposer.] In this context only is the free liquid test pertinent.

#### D-1b(1). Test for Free Liquids

To determine if free liquid is present, the "free standing liquid" test as described in 47 FR 12316-18 (March 22, 1982) is used. If any liquid is observed when packaging, material is checked for land fill restrictions.

#### D-1b(2). Description of Containers

See Section D-la(1) for drum descriptions.

#### D-1b(3). Container Management Practices

These containers are managed as described in D-la(2).

#### D-1b(4). Container Storage Area Drainage

These containers are on pallets in the same area as described in D-1a(3) and (4).

#### D-2. Tanks

All tanks used to store dirty wash solvent AND SOLVENT RECOVERY STILL BOTTOMS (the only HW kept in tanks) are carbon steel, non-pressurized, above-ground and have painted exteriors.

The primary design considerations were:

- \* Safe containment of ignitable organics.
- \* Prevention of pressure build-up through flash-arrestor, conservation vents.
- \* Grounding of tanks and piping.

Years of paint making experience has shown us that steel tanks are not corroded or erroded when used to store organic solvents at ambient or near ambient temperatures.

#### D-2a. Description of Tanks

The [enclosed] list in Section D-2b(3)(A) (tank system installation) shows tanks numbered 1, 14, W-09, and W-10. A descriptive sheet for each tank is enclosed along with a typical tank sketch and two recovery flow charts in Section

<u>D-2a(1)</u> <u>DETAILED PLANS OF TANKS</u> OAC 3745-50-44(C)(2)(b) SEE ATTACHMENTS D-2a(2)-1 THRU -8.

# D-2a(2) DETAILS OF TANK SYSTEMS AND CONTROLS OAC 3745-50-44(C)(2)(c)

SEE ATTACHMENTS D-2a(2)-1 THRU -8.

#### D-2b. Tank Corrosion and Errosion

As indicated [above] in D-2, no corrosion has been experienced from organics in these tanks due to compatibility with steel, the ambient temperature, atmospheric pressure and relatively fast turnover of the dirty wash AND PAINT PRODUCTS.

## <u>D-2b(1)</u> <u>General</u> OAC 3745-55-92(A)

As indicated above, no corrosion has been experienced from organics in these tanks due to the compatibility with steel, the ambient temperature, atmospheric pressure and relatively fast turnover of the dirty wash. All tanks are located above ground and have painted exteriors. SEE ATTACHMENTS D-2b(1)-1 THRU -4.

#### D-2b(2) EXTERNAL CORROSION PROTECTION OAC 3745-55-92(G)

All the outside above ground tanks on this site including the new HW tanks are protected against corrosion with various paint finishes up to and including use of chemical resistant finishes. Proper period inspections and maintenance assures us of the integrity of the painted surfaces on all the outside chemical storage tanks.

THE CERTIFICATION REQUIRED OF PERSON(S) SUPERVISING THE INSTALLATION UNDER OAC 3745-55-93(G) WAS NOT PREPARED AT THE TIME OF INSTALLATION. THE THREE TANKS WERE INSTALLED BEFORE DECEMBER OF 1988.

#### <u>D-2b(3).</u> <u>DESCRIPTION OF TANK SYSTEM INSTALLATION AND TESTING</u> PLANS AND PROCEDURES

#### D-2b(3)(A). TANK SYSTEM INSTALLATION

Three of the tanks were probably designed in accordance to published standards; however, documentation of same cannot be found. Tank #1 was designed according to published standards in 1988. Thickness measurements are visual inspection of the tanks conducted in 1988 by plant personnel.

The normal operating maxumum height of liquid in these tanks is 90% and 92% of their capacity. At these levels a visual and audible alarm will activate in appropriate area. The waste feed system is controlled by automatic valve system, that will disable pumps and close feed valves at a maximum level of 96%.

Any hazardous waste spill in the hazardous waste storage area

will be promptly cleaned up and the area decontaminated.

All tanks used to store/process dirty wash solvent or solvent recovery sludge are designed to meet the [new] RCRA requirements for secondary containment of the tank and it's ancillary equipment. Tanks are carbon steel, non-pressurized, and installed above dround. Also, all piping handling hazardous wastes is of carbon steel, with welded connections or welded flanges AND INSTALLED ABOVE GROUND. Each tank is vented through a conservation vent/flame arrestor and all are grounded. The primary design considerations were:

- \* Safe containment of ignitable organics.
- \* Prevention of pressure built-up through use of flash arrestors/conservation vents.
- \* Grounding of tanks and piping.

The attached list shows the 4 tanks with a description sheet for each tank. Also included are tank and piping diagrams and process flowsheets.

SEE ATTACHMENT NOS. D-2a(2)-1 THRU -8. SEE ATTACHMENT D-2b(3)(A).

TANK NO.	LOCATION	SIZE	DESCRIPTION	DESTINATION
1	Filling Floor	600	Collects dirty wash solvent from paint manufacturing.	Tank# 14
14	West Tank Farm	10000	Hold tank for wash solvent from paint mfg. & PT cleaning Feed tank to solvent recovery.	
W-09 .	West Tank Farm	15000	Collects waste solvent from resin mfg. Feed tank to boilers.	Boilers(3)
W-10	West Tank Farm	15000	Hold tank for sol- recovery fuel sludge.	Off-site vent blen- ding.

#### Tank NO.1 Description

Label: Tk#1, Filling Floor Dirty Wash Solvent Accumulation

Location: "A" Building, 1st Floor (inside)

Purpose: To collect dirty wash solvent from cleaning paint mixing

tanks and equipment on all three floors of paint

manufacturing department. Wash solvent is

eventually pumped to Tank#14.

Filling: Dirty wash solvent from the upper floors is gravity

dropped to the tank through a dedicated pipeline. Dirty eash solvent from the first floor is pumped to the tank through a dedicated pumping station. Overfill protection closes automatic valves on the feed line and dasables the pumping station pump

when the level reaches 96% of capacity.

Emptying: At 85% of capacity, an automatic level control system will turn on a transfer pump which pumps the

dirty wash solvent out to the dirty wash solvent

storage/feed to solvent recovery tank (#14).

Level

Control: The tank is equipped with a continuous level detector which will:

- \* Provide level indication at the tank.
- \* Activate the automatic pump-out of the tank when the level reaches 85%.
- \* Activate visual and audible alarms when the tank level reaches 92%.
- \* Close automatic valves in the feed lines and disable the pumping station pump when the level reaches 96%.

Size: Design: The tank has a nominal capacity of 600 gallons. The tank is constructed of unlined carbon steel per asme pressure vessel code. It is 4.5' in diameter and has 5.0' high straight sides, dished top and bottom, and is equipped with an agitator. It is grounded to building steel, is operated at atmospheric pressure, and is vented above the building roof through a conservation/flame arrestor vent. The tank is supported by four angle-iron legs 4.0' long. It is located inside of the paint manufacturing building on a concrete floor, and is surrounded by painted brick walls on two sides and a 16.0" concrete curb on the other two sides. These walls and curbs form a diked area capable of holding 720 gallons. Since the tank is located indoors, accumulation of precipitation inside the dike is not a consideration. Any material in the dike from a

spill would be transferred to drums per plant spill control procedures.

#### TANK NO. 14 DESCRIPTION

LABEL:

TK-14, DIRTY WASH SOLVENT STORAGE/FEED TANK

LOCATION:

WEST TANK FARM (OUTDOORS)

PURPOSE:

TO COLLECT DIRTY WASH SOLVENT FROM THE FILLING FLOOR ACCUMULATION TANK AND THE PORTABLE TANK CLEANING

OPERATIONS, AND PROVIDES FEED TO SOLVENT

RECOVERY OPERATION.

FILLING:

DIRTY WASH SOLVENT IS PIPED FROM THE FILLING FLOOR WASH SOLVENT TANK AND THE PORTABLE TANK CLEANING AREA TO TANK #14 VIA DEDICATED

PIPELINES.

EMPTYING:

DIRTY WASH SOLVENT IS PUMPED FROM THE STORAGE/FEED TANK DIRECTLY TO THE ARTESIAN THIN-FILM EVAPORATOR IN THE SOLVENT RECOVERY AREA. THE EVAPORATOR RECOVERS CLEAN WASH SOLVENT AND

SEPERATES SLUDGE FOR DISPOSAL.

LEVEL

CONTROL:

THE TANK IS EQUIPPED WITH A CONTINUOUS LEVEL DETECTOR WHICH WILL:

- \* PROVIDE READOUT OF THE TANK LEVEL IN THE SOLVENT RECOVERY CONTROL CENTER.
- \* ACTIVATE AN ALARM IN THE SOLVENT RECOVERY CONTROL CENTER WHEN THE LEVEL IN THE TANK REACHES 92%.
- \* DISABLE THE FILLING FLOOR AND PORTABLE CLEANING TRANSFER PUMPS WHEN THE LEVEL REACHES 96%.

SIZE:

THE TANK HAS A NOMINAL CAPACITY OF 10,000 GALLONS.

DESIGN:

THE TANK IS CYLINDRICAL WITH A CONE-SHAPED BOTTOM AND TOP. IT WAS CONSTRUCTED IN 1981 OF CARBON STEEL WHICH IS 3/8" THICK ON THE BOTTOM AND SIDES TO 8.0', AND 3/16" ON THE SIDES ABOVE 8.0' AND ON THE TOP. THE SIDES ARE 16.0' TALL, AND THE TANK IS 9.6" IN DIAMETER. THE TANK IS OPERATED AT ATMOSPHERIC PRESSURE, IS VENTED THROUGH A

CONSERVATION/FLAME ARRESTOR VENT AND IS GROUNDED.

THE TANK HAS FOUR ANGLE-IRON LEGS, EACH 2'6" LONG. THE LEGS ARE MOUNTED ON CONCRETE PIERS 4' TALL. THE TANK IS LOCATED INSIDE ITS OWN DIKE WITH CONCRETE WALLS AND FLOOR, WHICH HAS A CAPACITY OF 11,950 GALLONS. THE DIKE HAS WALLS OF 7 1/2"-THICK CONCRETE AND A FLOOR OF 4 1/2"-THICK CONCRETE. THE TANK SITS ON FOUR CONCRETE PIERS, EACH OF WHICH IS SUPPORTED BY A FOOTER ROUGHLY 4' SQUARE AND 9" THICK. THE BOTTOM IS SLOPED TO A 4.0' BY 4.0' SUMP WITH A PUMP.

THE DIKE IS INSPECTED DAILY FOR ACCUMULATION OF PRECIPITATION OR ANY OTHER MATERIAL; IF THERE IS SOME PRESENT, IT IS SAMPLED AS DESCRIBED FOR THE CONTAINER PAD SUMP (SECTION D-la(4)). IF NO ORGANICS ARE PRESENT, THE SUMP IS PUMPED OUT TO THE SEWER. IF ANY ORGANICS OR OTHER WASTE MATERIAL ARE DETECTED, THE PUMP IS EQUIPPED WITH A HOSE CONNECTION TO PUMP THE DIKE CONTENTS TO THE WASTW WATER PRETREATMENT TANK, OR TANK WAGONS FOR PROPER DISPOSAL.

TANK NO. W-09 DESCRIPTION

LABEL:

TK-W09, RESIN WASH/STRIP SOLVENT

LOCATION:

WEST TANK FARM

PURPOSE:

TO COLLECT WASH/STRIP SOLVENT FROM THE RESIN AREA, AND

TO ACT AS A FEED TANK FOR THE PLANT'S 3

INDUSTRIAL STEAM BOILERS.

EMPTYING:

WASH/STRIP SOLVENT IS PUMPED TO ANY OF THREE POWERHOUSE

BOILERS. PLANT REQUIREMENTS FOR 150-LB STEAM DETERMINE

HOW MANY BOILERS ARE RUNNING AT

ANY GIVEN TIME.

LEVEL

CONTROL:

THE LEVEL IN THIS TANK WILL NORMALLY BE MAINTAINED AT BETWEEN 10% AND 80% OF CAPACITY. IF THE LEVEL SHOULD REACH 90%, A HIGH LEVEL ALARM WOULD SOUND IN THE BOILER HOUSE. IF THE LEVEL SHOULD REACH 95%, THE HIGH-HIGH

INTERLOCK WOULD

CLOSE AN AUTOMATIC VALVE ON THE LINE FEEDING THE

SIZE:

THE TANK HAS A NOMINAL CAPACITY OF 15,000

GALLONS.

DESIGN:

THE TANK WAS CONSTRUCTED IN 1978 PER 1977 ASME CODE SEC. VIII, DIV.1. IT IS MADE OF CARBON STEEL, 11.0' O.D., 20.0' TANGENT-TO-TANGENT, WITH 5/16" THICK WALLS AND 3/8" THICK HEADS. THE TANK IS EQUIPPED WITH AN AGITATOR, IS VENTED THROUGH A CONSERVATION/FLAME ARRESTOR VENT, AND IS

GROUNDED.

THE TANK IS LOCATED IN A DIKED AREA (SEE ATTACHED DRAWINGS) IN THE WEST TANK FARM. THE DIKE IS CONSTRUCTED OF CONCRETE AND IS CAPABLE OF HOLDING 17,950 GALLONS. THE DIKE IS EQUIPPED WITH A 2" DRAIN PIPE IMBEDDED IN THE DIKE WALL. THE 2" PIPE IS VALVED ON THE OUTSIDE AND EQUIPPED WITH QUICK COUPLING FITTINGS FOR PUMPOUT CONNECTIONS FOR REMOVAL OF PRECIPITATION OR SPILLED MATERIAL. THE 2" VALVE IS LOCKED IN A CLOSED POSITION AND REQUIRES SUPERVISORY APPROVAL AFTER TESTING TO UNLOCK. THE AREA IS INSPECTED DAILY FOR ANY ACCUMULATION; IF ANY IS PRESENT, THE SAME PROCEDURE AS FOR TANK NO. 14 IS USED FOR REMOVAL.

TANK NO. W-10 DESCRIPTION

LABEL:

TK-W10. SOLVENT RECOVERY SLUDGE

LOCATION:

WEST TANK FARM

PURPOSE:

TO COLLECT SLUDGE FROM THE SOLVENT RECOVERY PROCESS AND

HOLD IT FOR BULK SHIPMENTS TO A FUEL

BLENDING CONTRACTOR.

FILLING:

SLUDGE IS PUMPED FROM THE SOLVENT RECOVERY THIN-FILM EVAPORATOR TO THE SLUDGE TANK VIA A DEDICATED PIPELINE.

NORMAL SLUDGE FLOW RATE IS

LESS THAN 2 GPM.

EMPTYING:

WHEN THERE IS SUFFICIENT QUANTITY OF SLUDGE FOR A BULK

SHIPMENT, THE SLUDGE IS PUMPED TO A TANK

WAGON FOR OFF-SITE SHIPMENT.

LEVEL

CONTROL: THE TANK IS EQUIPPED WITH A LEVEL GAUGE WITH A READOUT

IN THE SOLVENT RECOVERY CONTROL CENTER. THE TANK LEVEL

IS NORMALLY MAINTAINED AT BETWEEN 10% AND 80% OF

CAPACITY. IF THE LEVEL SHOUL REACH 85% OF CAPACITY, A HIGH-LEVEL ALARM WILL SOUND IN THE SOLVENT RECOVERY AREA. IF THE LEVEL SHOULD REACH 90% OF CAPACITY, A

HOGH-HIGH INTERLOCK WILL SHUT DOWN THE SOLVENT RECOVERY

THIN-FILM EVAPORATOR.

SIZE:

THE TANK HAS A NOMINAL CAPACITY OF 15,000

GALLONS.

DESIGN:

THE DESIGN OF THIS TANK AND ITS SURROUNDING DIKE

IS IDENTICAL TO THAT OF TANK NO. W-09.

#### D-2b(3)(B). TESTING PLANS AND PROCEDURES

The existing Tank #14 was not tested for leaks, since it was an active storage tank already. The other 3 tanks (#1,\$W-09, and #W-10) were tested for leaks during installation as a safety requirement during welding. The three tanks were completely filled with water prior to any welding. There were no leaks detected during construction.

#### D-2c. Tank Measurement Practices

Different practices are used for each tank. The level controls and operational variations are outlined on each of the tank description sheets. All tanks are closed so the freeboard considerations of 264.192(b)(2) do not apply. The relationship of the various HW storage tanks is shown on the [two] enclosed recovery flow chart:

- \* Solvent Recovery
- \* Heat recovery
- \* DISPOSAL

The original (old) hazardous waste tank storage list and tank descriptions on pages 34 through 44.3 have been deleted and replaced with updated information under Section D-2b(3)(A) of this Part B submission.

- <u>D-2d(1)</u> <u>DETAILED PLANS OF CONTAINMENT SYSTEMS</u> OAC 3745-55-93(B) SEE ATTACHMENTS D-2a(2)-1 THRU -8.
- <u>D-2d(1)(b)</u> <u>MATERIAL OF CONSTRUCTION</u> OAC 3745-55-93(C)

  THE SPRAYED IMPERVIOUS LINING APPLIED TO THE INSIDE OF DIKES

HAS BEEN EXPOSED TO THE ORGANIC BASED PAINTS AND SOLVENTS AT THIS SITE, AND THE SPRAYED LINING HAS NOT DEGRADED BECAUSE OF THIS

EXPOSURE. WE BELIEVE THAT THE SPRAYED LINING IS COMPATIBLE.

SEE ATTACHMENTS NO. D-2b(1)-1 THRU -4.
SEE D-1a(4)

D-2d(1)(c) CONTAINMENT SYSTEM CAPACITY OAC 3745-55-93(E)(1)
SEE ATTACHMENT NOS. D-2a(2)-1 THRU--8.

#### D-2f(1)(a). TANK AGE DETERMINATION

Of the four current hazardous waste tanks:

Tank #1 on the filling floor is a newly fabricated tank. This tank was manufactured in 1988 and is appropriately stamped on a welded plate.

Tank #14 is an existing tank that was manufactured prior to 1981 and was installed in it's present location in 1981. It is believed that this was an existing tank on the site in 1981 and was relocated to it's present location for hazardous waste use.

Indications on some of our old records and blueprints make us believe that this tank was manufactured in 1967.

Tanks #W-09 and #W-10 were transferred here from another DuPont location. Based on some of the former site's employees' memories, these two tanks appear to be around 1979 vintage.

#### D-2f(1)(b) SECONDARY CONTAINMENT AND LEAK DETECTION

Each tank is equipped with secondary containment which is capable of retaining any spilled or leaked material and is capable of preventing the migration of these wastes to the soil, ground

water, or surface waters.

The secondary containment dikes are constructed of poured concrete which is compatible with the organic solvents and paint sludges handled in this system. Description sheets in Section D-2(b)(3)(A) of this Part B submission contain the details. All pumps associated with the tanks are installed within the dikes or enclosed with solid metal sheeting on open sides to prevent discharge outside the dike.

Certification of newly constructed dikes and testing and certification of an existing (for Tank #14) dike are included at the end of Section D. SEE ATTACHMENT D-2 $\beta(1)$  (-1). Thus -4.

Leak detection for these four tanks is based on visual observations. All four tanks are above floor/ground mounted, and the bottoms are easily observed for any possible leaks. The daily Tank/Dike integrity inspection assures of ample time to make corrections in case of normal structural leaks. Accumulated precipitation is cheched for possible contamination and [if clean is] HANGLED ACCORDING TO SECTION D-1a(4).

generally discharged to the sewer system within 24 hours.

#### D-2f(1)(c) REQUIREMENTS FOR AN EXTERNAL LINER, VAULT, DOUBLE-WALLED TANK OR EQUIVALENT DEVICE

The secondary containment dikes are constructed of poured concrete which is normally capable of retaining any spilled or leaked material. The interior of the dikes are also spray coated with an impervious substance (CHEMICAL RESISTANT COATING) which is compatible with the organics

handled at this site. The dikes are capable of retaining 120% of

the largest tank within the dike, which assures us of additional capacity to sufficiently contain precipitation from a "25 year, 24-hour rainfall event".

The secondary containment systems are free of cracks or gaps, and are constructed so as to completely surround the tank sufficiently to prevent lateral or vertical migration of the waste to any open earth areas in case of a sudden total release of the waste from the tank.

All ancillary equipment [is] INCLUDING PIPELINES ARE above ground.[,] Pipiline sections are connected with welded flanges or joints and are inspected daily as part of the tank inspection program.

#### <u>D-3</u> <u>OTHER TREATMENT/DISPOSAL FACILITIES</u>

A SMALL AMOUNT OF PROCESS WASTE WATER PRETREATMENT IS CONDUCTED

ON THIS SITE. COPY OF OUR PERMIT SUBMISSIN AND OHIO EPA PTI/PTA

PERMIT NO. D3-5716.

NAME E. I. DU PONT DE NEMOURS & CO. (INC.)

DEPARTMENT FINISHES & FABRICATED PRODUCTS

ADDRESS 1930 TREMAINSVILLE RD.

CITY TOLEDO STATE OH ZIP 43613

# HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE, OR PUBLIC SAFETY AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY

ACCUMULATION START DATE

L-30

Date: 1/29/82 Superseding Date: NEW

## TOLEDO AREA OPERATING PROCEDURE

AOP #655.000

TITLE: Storage pad Water Retension Basin, Service Area JOB: SAMPLE AND EVALUATE LIQUIDS FROM CONTAINMENT SYSTEM

BEFORE RELEASING ONCE A WEEK AND AFTER EVERY MAJOR

RAIN STORM.

GENERAL SAFETY REQUIREMENTS: TOOLS NEEDED:

SAFETY GLASSES AND RUBBER

DRAIN COVER WRENCH, DIP STICK

GLOVES.

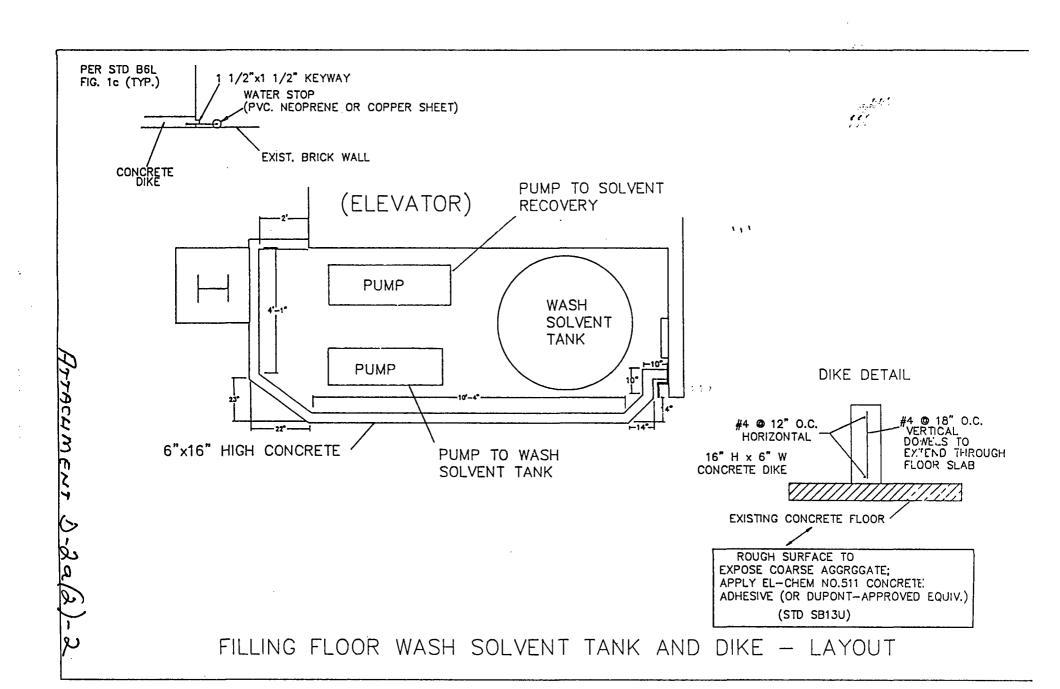
AND QUART CONTAINER (GLASS).

#### UNIT BREAKDOWN

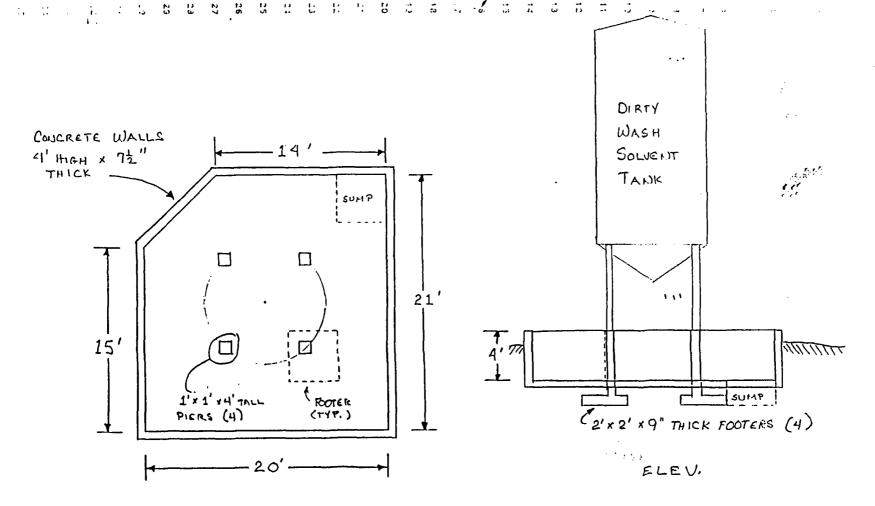
STEPS		KEY OPERATING, SAFETY, HEALTH, ENVIRONMENTAL INSTRUCTIONS	
1.	OPEN DRAIN COVER WITH DRAIN WRENCH.	1.	WEAR GLOVES AND SAFETY GLA- SSES. LIFT COVER OFF MANHOLE CHECK LEVEL VISUALLY.
2.	TAKE SAMPLE USING DIP STICK.	2.	WEAR GLOVES AND SAFETY GLA- SSES. POUR INTO GLASS JAR ANG ALLOW TO SIT 5 MINS.
3.	OBSERVE SAMPLE.	3.	WEAR GLOVES AND SAFETY GLA- SSES. (A) CHECK FOR ODOR OF SOLVENTS, RESIN, & PAINT.
	·		(B) PHASE SEPERATION (ORGA- NICS TO TOP) (C) CLOUD FROM PARTIALLY MISCIBLE ORGANICS.
		·	(D) DISCOLORATION DUE TO PIGMENTATION.
4.	IF ANY INDICATION OF ORGANICS IS PRESENT.	4.	TAKE SAMPLE TO LAB AND HAVE GAS CHROMATOGRAM FOR TOLUENE XYLENE, AND ACETONE RUN.
5.	IF THE WATER CONTAINS SIGNIFICANT AMOUNT OF ORGANICS.	5.	SITE ENVIRONMENTAL COORDINATOR & SUPPORT SUPERINTENDENT MUST DECIDE ON APPROPRIATE DISPOSAL OF THE WATER; PUMP TO POTW OR OFF-SITE SHIPMENT

- 6. IF NO ORGANICS INDICATED
  6. WEAR GLOVES & SAFETY GLASSES
  OPEN DRAIN VALVE WITH WRENCH
  & RELEASE CONTENTS TO SEWER
- 7. POR SAMPLE BACK INTO DRAIN 7. WEAR GLOVES & SAFETY GLASSES & IMMEDIATELY CLOSE VALVE.
- 8. RECORD OBSERVATIONS AND RELEASE.
- 8. USE SECONDARY CONTAINMENT RELEASE LOG.

ATTACHMENT D-/a(3)(e)-2

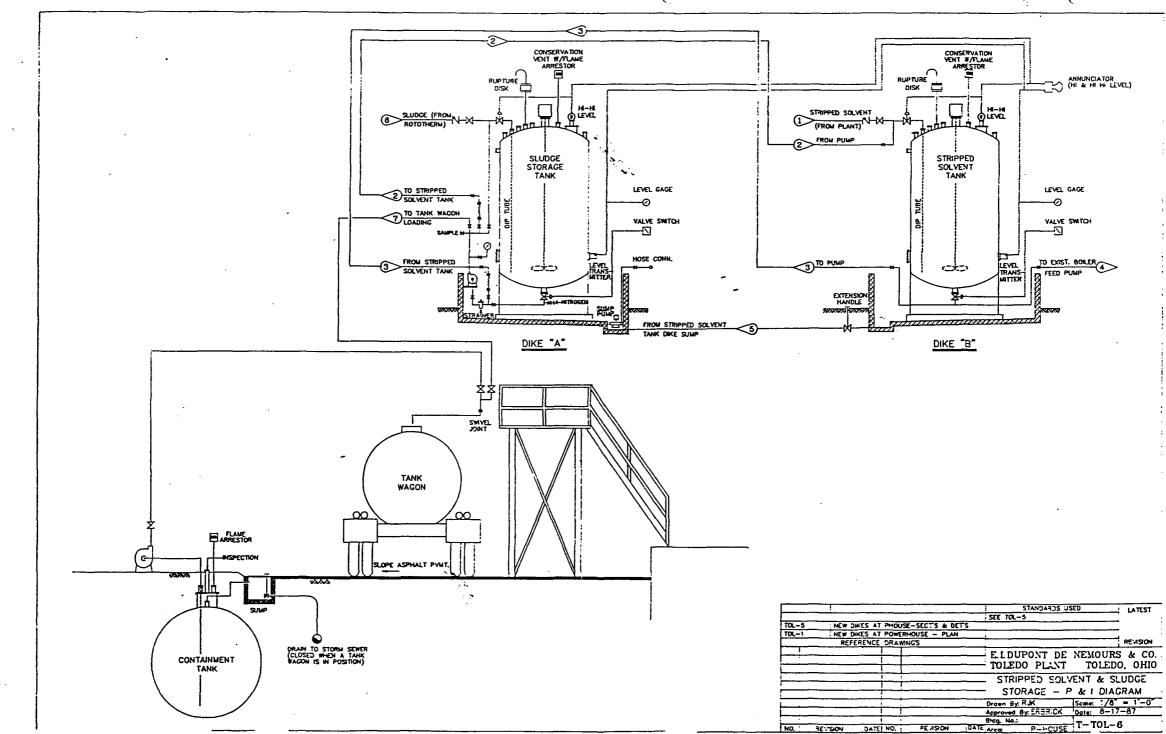


11:

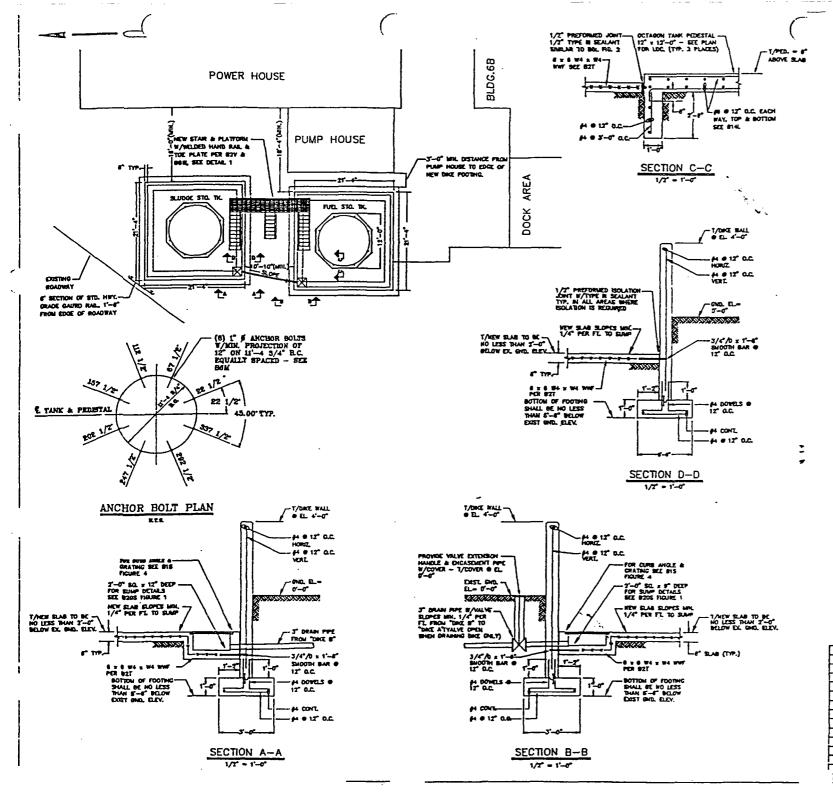


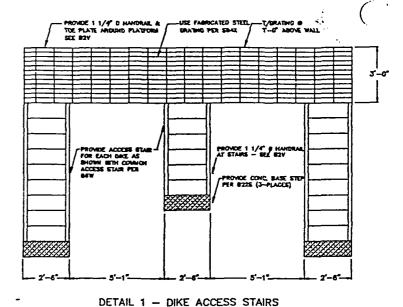
SCALE: 1/8" = 1 FOOT

EXISTING DIRTY WASH SOLVENT TANK DIKE



ATTACHMENT D-2a/2)-8



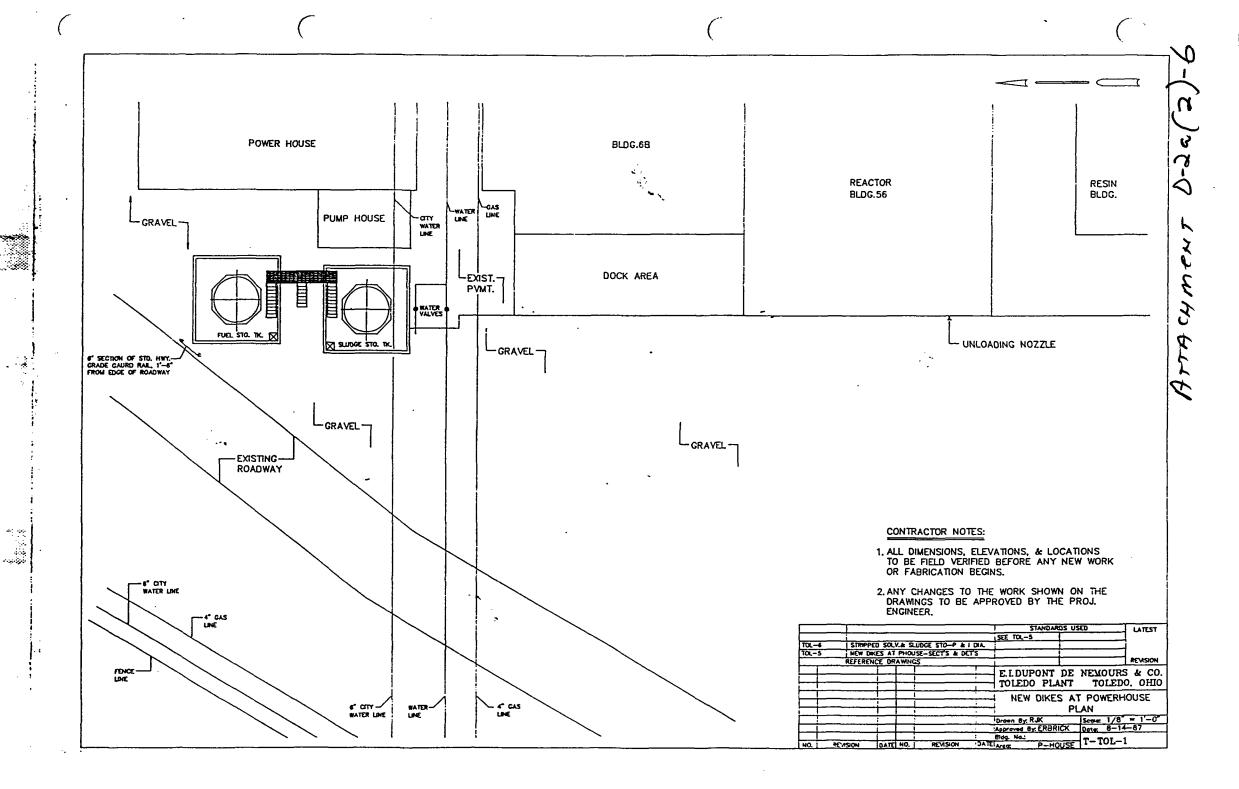


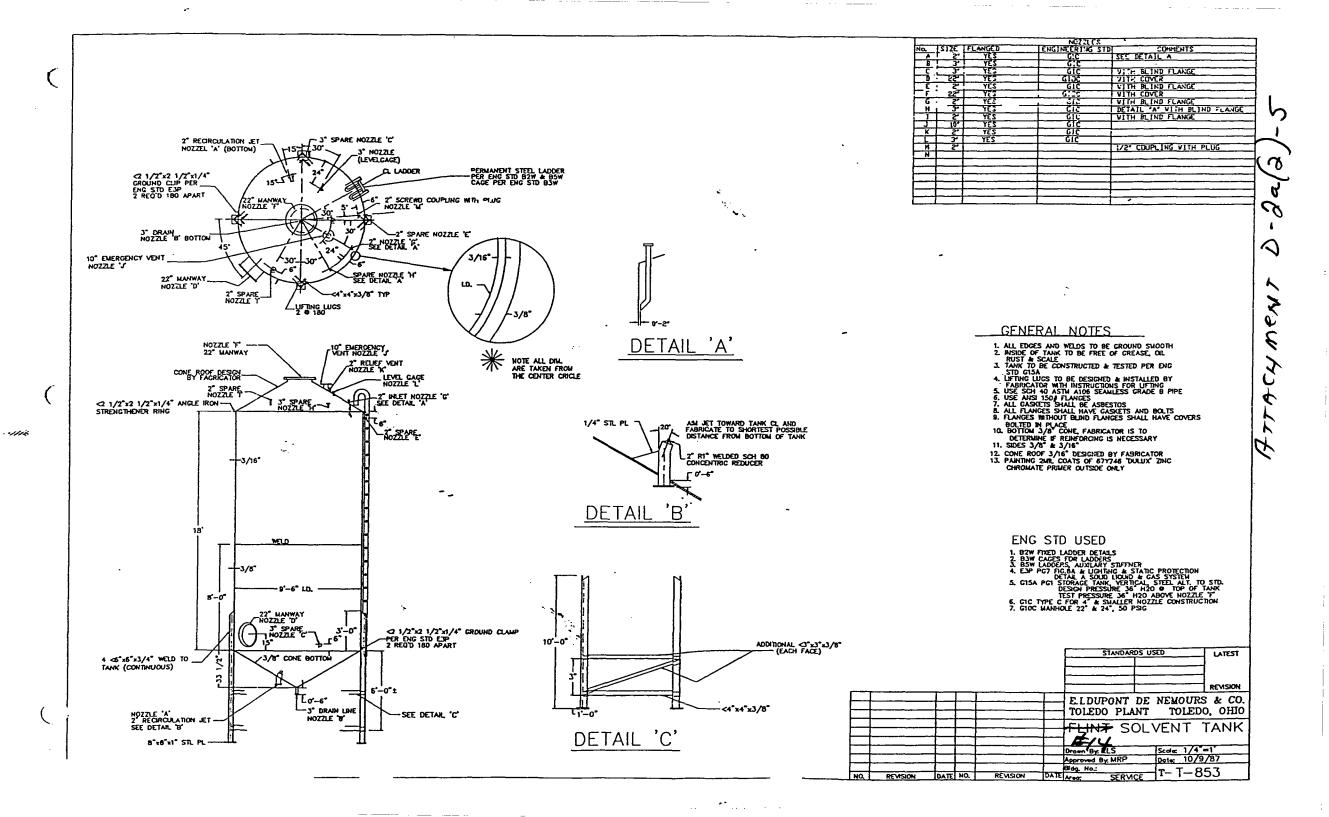
1/2" = 1"-0"

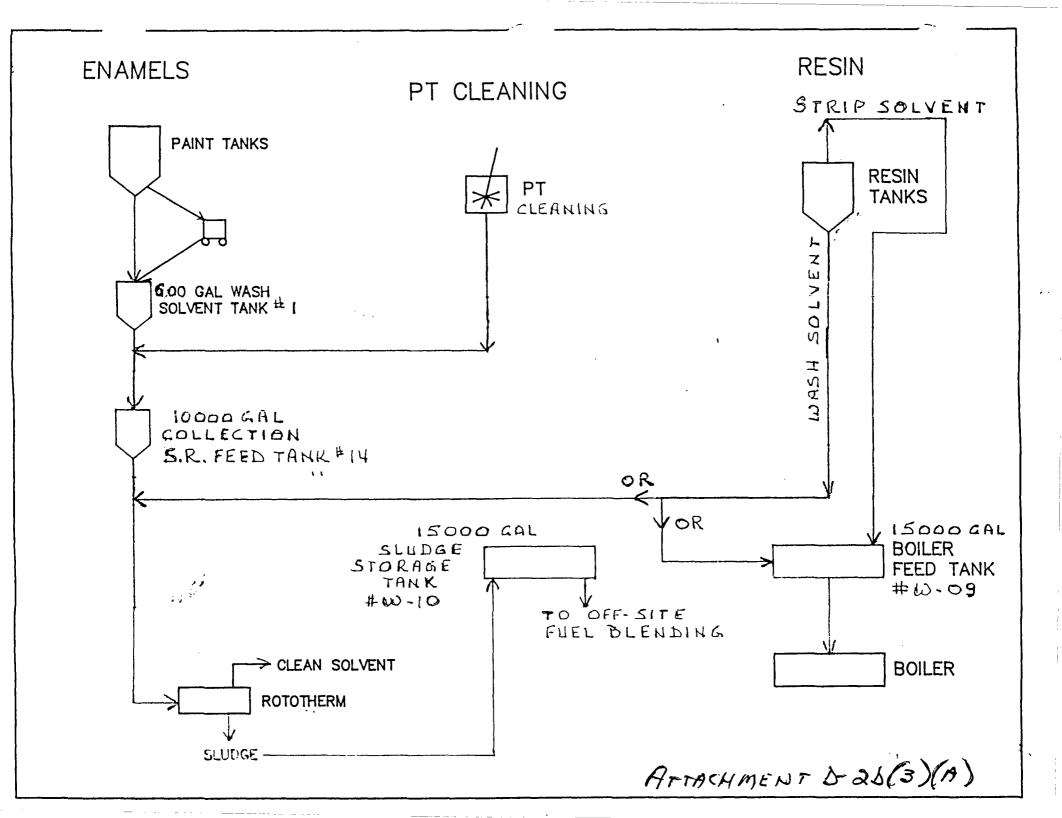
#### CONTRACTOR NOTES:

- ALL DIMENSIONS, ELEVATIONS, & LOCATIONS
   TO BE FIELD VERIFIED BEFORE ANY NEW WORK
   OR FABRICATION BEGINS.
- 2. ANY CHANGES TO THE WORK SHOWN ON THE DRAWNGS TO BE APPROVED BY THE PROJ. ENGINEER.

	T			STANDA	ARDS USED	LATEST	
				B5L , B14L	B2V		
TOL-6 STRIPPED SOLV.& SLUDGE STOP & I DIA			A B6M	B6W			
TOL-1	NEW DIKES	AT POWER	HOUSE - PLAN	B1S . 820S	SB4X	<b>-</b>	
REFERENCE DRAWNCS				B2T		REVISION	
				NEW DIK	ELDUPONT DE NEMOURS & CO. TOLEDO PLANT TOLEDO, OHIO  NEW DIKES AT POWERHOUSE SECTIONS & DETAILS		
				Drown By: RJK		/8" = 1'-0"	
				Approved By. ERB	RICK Date: 1	0-6-87	
				Bldg. No.:	T TO	1_5	
NO. RE	VISION DA	ATE NO.	REVISION	DATE AND P-1	HOUSE T-TO	<u></u>	







November 17, 1987

Ms. Jean Reinhart E.I. DuPont de Nemours 1930 Tremainsville Road Toledo, Ohio 43616



Re: Part B Application Tank Systems

Dear Ms. Reinhart:

In accordance with your September 16, 1987 request, Midwest Environmental Consultants, Inc. (MEC) has reviewed the tank system proposed within the Part B Application for E.I. DuPont de Nemours' (DuPont) 1930 Tremainsville Road - Toledo, Ohio facility.

The tank system was evaluated to the detail MEC felt necessary whereby an independent registered professional engineer certification could professionally and justifiably be stated. The requirements set forth in 40 CFR 264.192(a) have been the guidelines for our review. For clarification of requirements 40 CFR 264.192(a), we provide the following:

- Based on information supplied to MEC the tank system written assessment is included in the Part B Application, Sections B and D-2. The written assessment was prepared by DuPont and reviewed by MEC.
- MEC has reviewed the tank system design to determine if it had sufficient structural integrity and is acceptable for storage of hazardous waste. Specifically, MEC had reviewed the foundation, structural support, seams, connections, vessel structure, and containment dike structure to ensure that the system will not collapse, rupture, or fail. The compatability of tank materials and wastes to be stored had not been reviewed by MEC.

MEC's review of information presented by DuPont indicates the following compliance relative to the tank system's integrity.:

# MIDWEST ENVIRONMENTAL CONSULTANTS, INC.

3539 Glendale Avenue, Toledo, Ohio 43614

(419) 385-8332

ATTACHMENT D-26(1)-1

We trust this information is sufficient for your purposes. Feel free to contact us if you require additional information or have any questions.

Very truly yours

C. Michael Smith, P.E.

President

js/DMN/CMS Encl. D44Al.002 File (2)

í.

ATTACHMENT D-26(1)-3

(1

Containment Dike Capacity: Sufficient

Containment Dike Structural Integrity: Sufficient

Vessel Structural Integrity: Sufficient if constructed according to the ASME Pressure Vessel Code, or equivalent.

Tank Support System: Sufficient if constructed according to the ASME Pressure Vessel Code, or equivalent.

Tank Foundation: Sufficient

TK-114

Containment Dike Capacity: Sufficient

Containment Dike Structural Integrity: Sufficient, assuming the concrete walls have reinforcing steel for shrinkage and temperature. (This assumption is applicable in lieu of the dikes age).

Vessel Structural Integrity: Sufficient assuming the tank's existing condition is "as new".

Tank Support System: Sufficient

Tank Foundation: Sufficient

W09 W/O TK-7 and TK-4

Containment Dike Capacity: Sufficient

Containment Dike Structural Integrity: Sufficient

Vessel Structural Integrity: Sufficient, assuming the tank's existing condition is "as new".

Tank Support System: Sufficient

Tank Foundation: Sufficient

Attached is the certification statement prepared by MEC in accordance with 40 CFR 270.11.

Based on information supplied to me from the RCRA Part B Application for E.I. DuPont deNemours' 1930 Tremainville Road - Toledo, Ohio Facility, I hereby certify that to the best of my knowledge, information and belief, the proposed tank system is adequately designed in accordance with the applicable portions of 40 CFR 264.192(a).

MICHAEL SMITH

SMITH

WE - 9600 P. C. STERE CO. C. STERE

; (

C. Michael Smith, P.E.

President

MIDWEST ENVIROMENTAL CONSULTANTS, INC.

DATE: Nosember 17, 1987

ATTACHMENT D-26(1)-4

#### F. PROCEDURES TO PREVENT HAZARDS

The HWM facility is an integral part of an existing manufacturing site which for decades has been devoted to worker protection and property preservation through safety and fire prevention programs, security, maintenance and design. The establishment of a RCRA storage facility on the site had not changed any of the ongoing programs to prevent hazards—with the exception of adding an introduction to RCRA portion to employee training. Thus, the previously established programs for emergency response, spill control, safety meetings and training, equipment maintenance and inspection etc. have not been altered for RCRA compliance. Instead these active plans have been described in the appropriate sections that follow.

It is important to note that Du Pont's outstanding safety and fire prevention record—among the best in an industry that is better than average—has been accomplished through many site—wide programs that allow few exceptions to rules. For instance, carrying of lighters and matches in this plant is prohibited—the penalty is discharge. Smoking is allowed only in THE [specific] lunch room/office areas using installed electric lighters. [Thus, there is no reason for redundant] THERE ARE "No Smoking" signs at HWM facility operations.

# F-1 SECURITY

The storage of our hazardous wastes in the HWM facility contained within this plant site poses no injury potential to humans or livestock even if they could gain access to the site.

The reasons for this were covered in Sections B-1 and C-2a. In summary,

- o There is no acutely hazardous wastes which would pose an injury potential, and
- o The wastes are all enclosed in secure DOT containers or in steel tanks.

However, both recommended provisions for perimeter security are provided in addition to the lack of injury potential from this simple storage facility.

#### F-1a. Security Procedures and Equipment

## F-1a(1). 24-Hour Surveillance System

The site is under continuous ELECTRONIC surveillance 24-hours a day, 7 days a week by plant guards. In addition, SOME operating personnel are present on the site 24-hours a day, 7 DAYS A [during] week [days] (except holidays).

#### F-1a(2)(a). Barrier and Means to Control Entry

The plant is surrounded by a 6 foot high chain link fence, above which are 3 angled strands of barbed wire. All gates are kept locked except when under direct visual surveillance by guards or other plant personnel.

## F-1a(2)(b). Means to Control Entry

Guards maintain control of all entry and exit from the site-oth pedestrian and vehicles. Vehicles need valid shipping papers
or other identification. Visitors are required to sign the

register, give up all matches and lighters and be escorted into the site by plant personnel.

### F-1a(3). Warning Signs

[For reasons outlined in F-1a(1) and (2), the signs are not required under Section 264.14(c).] REQUIRED WARNING SIGNS ARE ATTACHED TO THE OUTSIDE OF THE FENCE EVERY 100 FEET.

#### F-1b. Waiver

The nature of our waste and secure containment in drums and tanks (plus the added perimeter security system) demonstrates that there is no injury potential to outside persons and that they would not be able to cause permit violations as is specified in Section 264.14(a)(1) and (2). [Thus, the warning signs described in Section 264.14(c) are not required and a waiver is requested.]

#### F-2. Inspection Schedule

A written inspection schedule is kept and maintained at the facility for weekly inspection of drums stored too close, [dikes and] pad for cracks and wet spots, container labeling, ramps for damage, DAILY tank inspections for structural supports and dikes, loading and unloading areas, and any other waste handling areas. Also tank overfilling equipment will be inspected daily.

## F-2a. General Inspection Requirements

The inspection at the site fall into three categories:

o Drum Pad

- o Tanks
- o Emergency Equipment

The emergency equipment inspection schedule pre-dates RCRA and is documented in Plant Procedure #44. The complete Inspection Plan (including Procedure #44) is included at the end of this section; ATTACHMENT F-2). Fire equipment inspection is also detailed in Sections B-9e & C of the Preparedness and Prevention Plan (PPP). The PPP is part of the Contingency Plan - Section G.

### F-2a(1). Types of Problems

The types of problems to be checked are outlined in Section C of the Inspection Plan.

# F-2a(2). Frequency of Inspections: OAC 3745-54-15(B)(4)

The inspection frequency for the drum pad is weekly AND TANK SYSTEMS DAILY (see Inspection Plan - Section F-2e). The inspection of safety items is indicated in Procedure #44 and the plant's computerized inspection/tickler schedule (sample attached to Procedure #44). SEE ATTACHMENT F-2.

The tanks AND CONTAINMENT SYSTEMS are in operating areas where many operators and supervisors observe them around the clock when the plant is operating. The guards make rounds during shutdowns to look for abnormal conditions (leaks, etc.). The presence of these employees is a secondary, informal, daily inspection which reinforces the formal, DAILY [weekly] inspection.

SEE F-2e(B)(1).

#### F-2b. Specific Process Inspection Requirements

#### F-2b(1). Container Inspection

The weekly inspection of the containers in storage is documented on the inspection log form as outlined in Section D of the Inspection Plan.

# F-2b(2). Tank Inspection

As outlined in Sections C-2 of the Inspection Plan, weekly inspections are logged for the tanks (as a group). Since the tanks have employee attendance and surveillance when in use, as described in F-2a(2) above, no formal log is kept of these daily observations.

#### F-2b(2)(a). Tank Construction Materials: OAC 3745-55-95(B)(1)

The tanks are all carbon steel, which is not corroded by the organics contained in them (see Section B-1 and D-2 above). All tanks are completely above ground (most are inside) and are checked for deterioration and leaks [weekly] DAILY per the Inspection Plan SEE F-2e(B)(1).

## F-2b(2)(b). Tank Surrounding Area: OAC 3745-55-95(B)(3)

The inspection referenced in the previous paragraph includes the surrounding area. SEE F-2e(B)(1).

# F-2b(2)(c). Tank Overfilling Control Equipment

The tanks have level gages and/or high level alarms which are observed daily when the equipment is in operation (see F-2a(2)).

No danger exists to humans or the environment, except ignition (See B-1), even if the level equipment should allow overflow some spent solvent. Our spill plan and normal practices would more than adequately cope with this danger potential. Inspection of the level controls/devices by operating personnel is done every day.

### F-2b(2)(d). Tank Monitoring Data

Our tanks have no other monitoring equipment. Therefore, no data are taken. All tanks are grounded and vented to the atmosphere via flame arrestor/conservation vents.

#### F-2b(2)(e). Tank Level of Waste

This requirement for uncovered tanks is not applicable to our closed tanks.

#### F-2b(2)(f). Tank Condition Assessment

Visual inspection during operation and at the time of repainting—coupled with a lack of leaks—will suffice to assess these tanks as in good condition. Should indication of external corrosion or leakage be uncovered by operator or mechanics, a thorough assessment of the tank's condition would be made (empty, clean, examine inside and out, hydrostatic test and if necessary, an evaluation of metal thickness).

#### F-2b(2)(g). Tank Interim Inspection

Since there is little or no motion in these tanks, no erosion is anticipated. The spent solvents are not corrosive to the tanks

and no interior deterioration is anticipated. The solvent liquid and saturated vapor effectively prevent any rusting of the interiors from ambient air moisture. These assumptions have been borne out by years of use of this construction tanks for raw material, intermediate and finished product storage in solvent-based paint production.

#### F-2c. Remedial Action

The action to be taken for specific conditions found during formal inspection or employee observations are outlined in Section D-4 of the Inspection Plan.

#### F-2d. Inspection Log

A blank of each Inspection Log is included in the Inspection Plan. A sample of one page of a log is attached. The balance of the logs are on file at the site and are maintained for three years (See Section D-3 of the Inspection Plan). SEE ATTACHMENT F-2d-1.

#### F-2e. INSPECTION PLAN

#### A. General

- 1. 40 CFR 265.15 requires an inspection plan to provide early detection and correction of hazardous waste leaks and to insure emergency equipment is operating properly.
- 2. This plan is intended to insure that:
  - (1) all storage containers and tanks remain in good condition;
  - (2) any damaged or leaking HW containers are promptly re-

#### containerized

- (3) any HW leaks from tanks are promptly detected and stopped;
- (4) any spill of HW in storage areas is promptly cleaned up; and
- (5) all safety and emergency equipment is in good operating condition.
- 3. This plan is no different than existing policy and practice except the formal log and record keeping for the storage areas.
- 4. Management of the facility will have the responsibility to audit the performance of assigned inspectors by checking the log keeping and spot checking the storage areas weekly.

#### B. Frequency

1. OAC 3745-54-15(B)(4) SPECIFIES DAILY INSPECTIONS OF HAZARDOUS WASTE LOADING/UNLOADING AREAS AND CONTAINMENT SYSTEMS.

OAC 3745-55-95(B)(1) specifies DAILY [weekly] inspectionS for HW tanks SYSTEMS.

OAC 3745-55-95(B)(3) SPECIFIES DAILY INSPECTIONS OF TANK
SYSTEM CONSTRUCTION (INTEGRITY) MATERIALS AND SORROUNDING
AREAS

INCLUDING SECONDARY CONTAINMENT FOR EROSION AND WASTE RELEASES.

2. The best time for storage area inspection would be early in the week after the facility has been closed for the weekend.

- 3. All containers and tanks should be checked immediately following a materials handling accident or major container failure.
- 4. The safety equipment is inspected in accordance with Procedure #44 and the computerized inspection/tickler system (weekly, monthly, quarterly, etc.)

#### C. Items to be Checked

# 1. Drum Pad

- a. Leaks or evidence of significant deterioration or containers
- <u>b.</u> Evidence of physical damage (such as fork truck impact).

#### 2. Tanks

- a. Leaks or evidence of significant deterioration of tanks
- b. Leaks from piping in system
- c. Evidence of over-flow (on tank sides)
- d. Condition and function of level gages and any other instrumentation
- e. Surrounding area for evidence of leaks

#### 3. Safety Equipment

- a. Evidence of physical damage
- b. Other parameters per Operating Procedure #44

### D. Logs

- 1. An inspection log shall be maintained for each separate storage area -- as designated on Form 3, page 5 of the facilities Part A (Interim Status) permit application.
- 2. Format of the inspection log is attached. (Same format

used for container storage area and tanks.)

- 3. All logs are numbered sequentially and kept on file for at least three years after the inspection date (normally a year's worth will be disposed of at a time -- 3 years after the facility prepares its annual report in January to cover that year's inspection).
- 4. It is essential that:
  - a. The weekly schedule be adhered to
  - <u>b.</u> Any discrepancies be noted and corrective action noted (date when done)
    - o Leaking bungs need new gaskets.
    - o Leaking open-heads need new top gaskets.
    - o Leaking or badly damaged drums require re-drumming.
    - o Leaking tanks, pipes, etc. require immediate
      maintenance attention to prevent ignition of vapors.
  - c. The <u>absence</u> of any leaks, etc., to be noted under "Observations" as <u>None.</u>

#### F-3. WAIVER OF PREPAREDNESS AND PREVENTION REQUIREMENTS

No waiver is sought since the plant site facilities are adequate to meet any situation resulting from the storage of ignitable HW and do meet the statutory requirements of 40 CFR 264.32.

#### F-3a. Equipment Requirements

The site meets all of the requirements below:

### F-3a(1). Internal Communication

The plant has a 14-box Gamewell double loop, fire alarm system, with site-wide, clearly audible horn/bell signals. When activated, the system rings the location code of the box pulled. The plant supervisory and management personnel regularly uses a radio system consisting of:

- o A base station at the guard house
- o 23 hand-held two-way radios which can call each other and the base station
- o 22 pagers which can only receive a verbal message from the base station

This radio system is an integral part of the plant's rapid response to any emergency situations on the site. The plant site also has a telephone system with interval 3-digit dialing from about 120 phones, with ability to contact radios and pagers. SEE [List] attachMENT [ed (see SSA & SSB)] F-3a(2)-2.

#### F-3a(2). External Communications

Most calls of an emergency nature would be made by the guards on duty every day, around-the-clock at the main gate house. They have an extensive procedures book ("Security Manual") which covers all aspects of perimeter surveillance, access restrictions, and emergency responses [(see Index attached)]. To reduce errors and speed response, a "speed call-in" system allows two-digit, four-second dialing of persons who might be needed in an emergency (fire, police, hospitals, emergency coordinator, City of Toledo management, etc.). For example, to dial the fire department

requires you push \*,2,0.

Any drop in fire system pressure caused by opening a hydrant, fire system breakage or sprinkler activation will give an alarm, to American District Telegraph (ADT). ADT would notify the guard house immediately and/or the city fire department.

In addition as a backup, a large percentage or the telephones on the site can dial outside ("3") and reach emergency numbers listed on the inside of the Toledo phone directory.

# RADIO IDENTIFICATION NUMBERS TELEPHONE TO TWO-WAY RADIOS

SEE ATTACHMENT NO. F-3a(2)-1

#### PAGER CARRIERS

SEE ATTACHMENT NO. F-3a(2)-2

## TELEPHONE TO PAGERS PROCEDURE

SEE ATTACHMENT NO. F-3a(2)-2

# F-3a(3). Emergency Equipment

A detailed list of fire fighting equipment (over 200 hand extinguishers plus firehoses, deluge guns, foam generators, etc.) available to employee fire brigades (one on every shift) and compatible with City of Toledo fire department equipment is given in the ENCLOSED [attached] Preparedness and Prevention Plan (PPP).

# F-3a(4). Water for Fire Control

Sufficient water is available for the fire system described in

OHD 005041843 / 03-48-0195 Revised June 28, 1991

the PPP. A diesel fire pump can deliver 1,500 gpm of water at 125 psig pressure for operating the hosesystem, sprinklers and foam generating equipment. There are two water storage facilities with 130,000 gallons of capacity on-site (see PPP Section B-7).

#### F-3b. Aisle Space Requirement

All HW storage units are accessible by Fire Brigade/Fire Department vehicles and personnel at all times.

### REPORTING SPILLS USE CODES

SEE ATTACHMENT F.

EMERGENCY SPEED CALL LIST DISASTER CONTROL ORGANIZATION

SEE ATTACHMENT F.

#### EMERGENCY AND MISCELLANEOUS

SEE ATTACHMENT F.

FOR SPILLS (UPSETS) AND POLLUTION COMPLAINTS

SEE ATTACHMENT F.

#### F-4. PREVENTIVE PROCEDURES, STRUCTURES AND EQUIPMENT

Several existing plant procedures are in the PPP and are applicable to this section. Again, as discussed in B-1 and F (introductory paragraphs), the entire spectrum of raw materials,

intermediates, finished products and wastes on this site require handling as ignitable, hazardous materials. No special procedures, structures or equipment are used for HW.

#### F-4a. Unloading Operation

Any drums of HW received or handled from generating operations on site are handled on pallets by outside fork trucks with driver protection overhead guards, flashing lights, back-up alarm, etc. Standard Practice No. 45 covers fork truck practices. SEE ATTACHMENT F-4a-1 AND -2.

#### F-4b. Run-Off

[The tanks,] With the exception of number 1 [13 and 14], ALL are [inside operating buildings and have no run-off] OUTSIDE.

Tanks [13 and] 14, W-09, AND W-10 are located in individually diked areas where contaminated run-off can be contained and pumped-out.

The container storage pad has its own dike, retention basin and release valve to contain run-off prior to testing, as described in Section -1a(3) & (4).

#### F-4c. Water Supplies

The plant has no nearby water supplies which need measures to prevent contamination. Two on-site wells are used only for cooling water (not potable). The water in NPDES outfalls F216001 and F216002 is monitored by daily grab samples. Outfalls 001 and 002 leave the site by common pipe after joining a city storm sewer which crosses the plant.

# F-4d. Equipment and Power Failure

A power outage will have no impact on the safety of this site. The fire main system has a diesel operated fire pump requiring no power for operation. An unexpected electrical shut-down will have no impact on the pumping of spent wash solvent, except for temporary cessation of transfer operations. The only equipment actively involved in the handling of containerized is fork lift trucks. 21 trucks are available on the site, allowing spares to be utilized for the handling of HW.

# F-4e. Personnel Protective Equipment

Our safety and industrial hygiene program meets or exceeds OSHA requirements in every aspect of worker safety. The use of company supplied personnel protective equipment is mandatory for tasks which otherwise would pose a risk to employees. The entire HW facility is a safety glasses area. Safety shoes, respirators (or air-supplied masks), gloves, hard hats, and face shield are examples of safety equipment used on this site. As noted previously, handling of HW is not a new hazard to our employees—all the constant safety effort for the regular materials we use applies to our HW also.

# F-5. PREVENTION OF REACTION OF IGNITABLE, REACTIVE & INCOMPATIBLE WASTES

As indicated earlier, almost all the materials on the plant (raw material, intermediate, finished products and wastes) are ignitable and no new precautions or procedures are necessary due to RCRA HW regulations. We normally have no reactive wastes. The

exception is the unreacted/partially reacted monomer (WOT-8) waste streams. Only a few drums have been generated since RCRA went into effect in 1980. The material is chemically inhibited for stabilization, drummed at its generation point, labelled and disposed of off-site by contract incineration promptly without mixing with other wastes.

# F-5a. <u>Precaution to Prevent Ignition or Reaction of Ignitable or Reactive Waste</u>

As described in Section B-1 and the introductory paragraphs of Section F, the entire site is controlled for ignition source through smoking area restrictions, "no matches/lighters" policy, welding/burning permit system and continual safety training of all personnel. Specifically, these precautions are taken:

- o No matches or lighters may be carried by anyone on their person, anywhere on the entire plant site (except in the for burning permit situations if needed). Penalty for employees is discharge; for contractors and visitors it is expulsion from the site.
- o The use of any flame-producing or ignition source (welding, cutting, burning, etc.) requires the issuance of a "burning permit". The procedure for obtaining the permit requires an on-the-spot inspection and the signature of the maintenance supervisor of mechanic doing the work, area supervisor where the work is being done, and the fire chief. It also requires careful selection of proper fire prevention precautions and establishment of a fire watch (additional) person with

adequate fire extinguisher <u>in hand</u>). The permit has a finite life time--usually only one shift (reference: Standard Practice V-11, Permits for use of open flame and electric tools).

- o The entire plant is grounded to prevent static build-up and discharge (including building frames and fixed equipment).

  All portable equipment usage and ignitable liquid transfers requires grounding by special clamps and/or grounded electrical plugs. In production areas, use of electrical tools also requires a permit (again see Standard Practice V-11).
- o Smoking is permitted in 2 LOCATIONS ONLY LOCATIONS ONLY,

  [certain areas inside the plant (such as front office,
  cafeteria, some conference rooms, etc.)] THE CAFETERIA AND 1

  PRIVATE OFFICE IN THE OFFICE BUILDING. [by providing]

  Electrical lighters to prevent non-intentional carrying of
  matches/lighters back to the workplace ARE PROVIDED.
- o The No-Smoking/fire prevention theme is repeatedly used in frequent employee safety meetings. It is an integral part of all contract with non-employees for work to be done on the site and part of weekly safety inspections and management audits.

# F-5b. General Precautions for Handling Ignitables or Reactive Waste and Mixing of Incompatible Waste.

The making of paint is essentially a mixing process. All paint ingredients in the wastes may be mixed for storage since they are compatible. Certain raw materials used in resin production are not

in our waste streams. If a situation involving mischarged ingredients or a spill of these materials is encountered, they are never put in any of the spent wash solvent tanks but always into clean drums and marked with their contents. The [Waste Management] ENVIRONMENTAL Coordinator then is contacted to arrange for suitable, safe disposal by off-site contractors.

# <u>F-5c.</u> <u>Management of Ignitable or Reactive Wastes in Containers</u>

The site handles no reactive wastes, ALTHOUGH CHARACTERIZATIONS AND CONTRACTS ARE IN THE SYSTEM AS A STAND-BY. The containers on the storage pad are a minimum of 400 feet from the site property line. Should a reactive waste be generated from some future unusual occurrence, it would be drummed into specially labelled drums (description and [new] WCF No.) and stored in a segregated area of the drum pad while the immediate disposal arrangements are made (see F-5b).

#### F-5d. Management of Incompatible Wastes in Containers

We essentially have no incompatible HW wastes on the site. All HW's are compatible with the drums used for storage/off-site shipment.

# F-5e. Management of Ignitable or Reactive Wastes in Tanks

The HW in tanks is all dirty wash solvent and is ignitable in nature. There is no reactive waste on the

site that would ever be placed in tanks. The tanks and piping are bonded together and grounded to prevent static build-up and possible ignition. Additions to the tanks are made by pouring from a container grounded to the tank or by using a grounded hose/pump combination from a grounded container. All tanks are vented to the atmosphere through pipes fitted with conservation type flame arrestor vents. This combination of procedures and equipment has been satisfactorily used for decades of handling ignitable materials in the plant.

## F-5f. Management of Incompatible Wastes in Tanks

All the spent wash AND STRIP solvents, AND THE SPLVENT RECOVERY STILL BOTTOMS placed in these tanks are known to be compatible from years of experience and WCF's.

# F-5g & h. Management of Waste Piles

There are no waste piles on this site.

# EMERGENCY SPEED CALL LIST DISASTER CONTROL ORGANIZATION

TITLE	CODE	TH	ELEPHONE NUMBERS
Fire Dept.& Rescue Squad	20	911-9 If	Not Using Speed Phone
Protection Coordinator	21	865-7341	(George Cross)
ASSISTANT PROTECTION COORDINATOR	22	536-0607	(Eric Melin)
Disaster Coordinator	23	866-8691	(Ken Hohlbein
Plant Security:	24	472-7249	(Tom Kaczmarek)
Communications/Rublic Affairs Coord.	25	536-0607	(Eric Melin)
Asst. Comm./Public Affairs Coord.	26	882-5241	(S.J. Bright)
Transportation Coordinator	27	241-1422	(Herman Dunn)
Asst. Transportation Coordinator			(Ray Sheehy)
Special Hazards Coordinator	29	847-7067	(D.R. Az <sub>ema)</sub>
Asst. Special Hazards Coordinator	30	885-5877	(L.D. Harris)
Plant Nurse	31	856-8358	(B.A. Brogle) UL
Plant Physician	32	882-0660	(J.R. Stevens, MD)
Safety Supervisor	33	723-7444	(D.L. Starkey)

# EMERGENCY AND MISCELLANEOUS

*	City of Toledo E.P.A	2 5	602 0250			
••	Minister of the least of the le	33	693-0350			
	Night and Weekends		242-5821 or 242-5914			
*	Coast Guard (Ohio)	36	259-6448			
	Ohio E.P.A. (State)	37	1-800-282-9378			
	Chemtrac	38	1-800-424-9300			
	O.H. Materials (Emerg. Clean-up)	39	255-5100			
	Matlack	40	693-6531			
	A.D.T. (Alarm Company)	41	243-6266			
	City Police (Toledo)	42	9-911			
	St. Vincent Hospital (Burn Unit)		321-4354 (Emerg. Dept.)			
	Mercy Hospital		259-1600 (Emerg. Dept.)			
	Toledo Hospital		.471-4101 (Emerg. Dept.)			
	REMSNO		9-911			
	WALKER AMBULANCE	48				
	Plant Manager (S.J. Bright)		Speed Number 26			
	Emongongu Collulan Dhana		262 6203			
	Emergency Cellular Phone		262-6203			
	FOR SPILLS AND POLLUTION COMPLAIN	ጥያ				
	(Environmental Control Coord.)					
·						
	Tony Parchomenko		841-8201			
	EMERGENCY PAGER	5 NC	o. 534-7467			

Bomb Threat, Search Procedures, Riots or Demonstrations

# Call Following If A Call Is Received:

(1)	Protection Coordinator	George Cross	865-7341
<sup>-</sup> (2)	Assistant Protection Coordinator	Eric Melin	536-0607
(3)	Security Superintendent	Dan Johnson	729-2719
(4)	Plant Security	Tom Kaczmarek	472-7249

SAFETY PROCEDURE #44 FIRE VALVE SHUT OFF DATE: 5/7/86

SUPERSEDING DATE: 8/26/82

REVISED BY: G. N. SHUK APPROVED BY:

# INTRODUCTION

The purpose of this procedure is to outline the steps necessary to shut off a section of the Plant's sprinkler protection system while that section of the Plant is in operation. This procedure applies to the Maintenance Department when they are repairing or modifying a section of the Plant's sprinkler protection system where it is necessary to shut off a post indicator valve (PI valve) a sectional control valve, or fire pump valve.

#### DETAIL

- 1) Notify the Plant Manager or his Representative of the valve number to be shut off, the affected section of the Plant (fig. 1) and the reason for doing so. The Plant Mangager or his Representative are the only personnel with the authority to authorize a shut down of the Plant Sprinkler System.
- 2) A red "Fire Valve Shut" card (fig. 2) indicating the valve number, the section of the Plant it controls, the date it was closed, the date it will be opened, and the reason for closing the valve will be presented to the Site Superintendent or designee for his signature.
- 3) The Area Supervisor or designee of the affected area and the Plant Guard shall be notified of the valve number to be shut off, the affected section of the Plant, and the reason for doing so.
- 4) ADT shall be notified of the section of Plant will be affected Phone number: 243-6266.
- 5) In case of a PI valve, the valve shall be closed by the handle provided, leaving the handle on the valve in the operating position.
- 6) Attach the "Fire Valve is Shut" card to the end of the valve handle so that it is visible.
- 7) In the case of a sectional control valve, close the valve with the handle provided and leave the handle on the valve unless it hinders the operation of the Plant or poses a safety hazard itself.
- 8) Attach the "Fire Valve is Shut" card to the handle if attached to the valve, or as close to the valve as possible so that it is readily visible.
- 9) After the work has been completed, open the PI or sectional control valve and replace the valve handles to their original

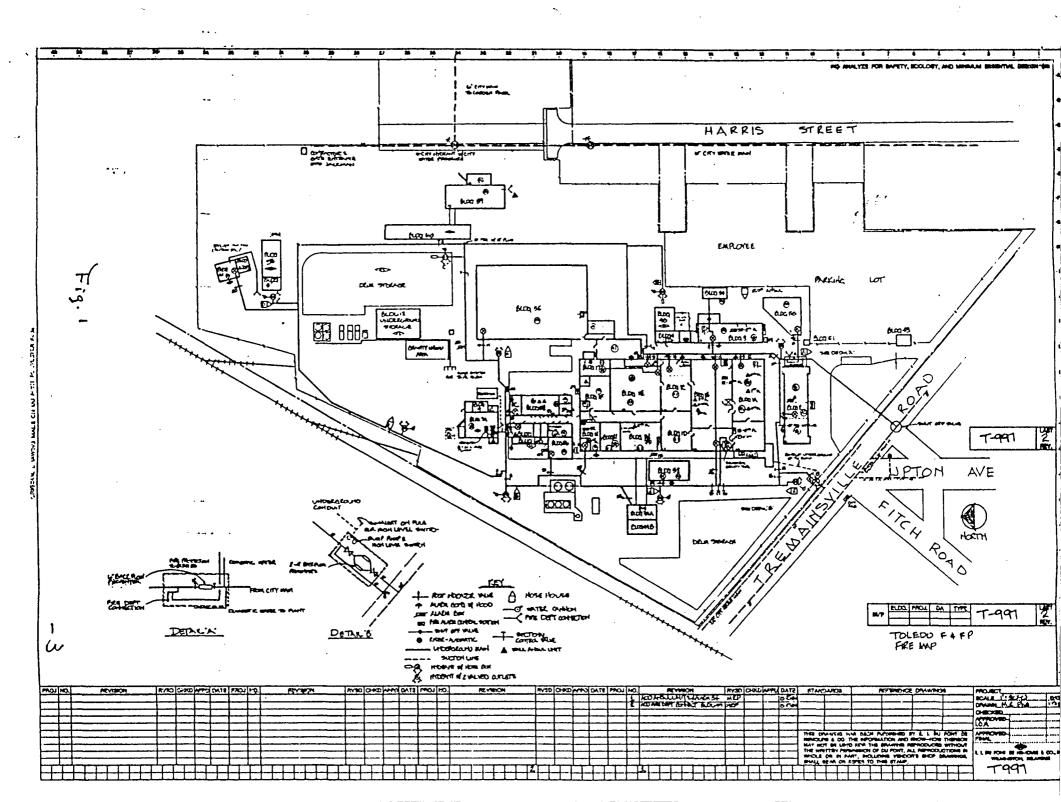
ATTACH MENT F-2-1

SAFETY PROCEDURE #44 FIRE VALVE SHUT OFF DATE: 5/7/86 SUPERSEDING DATE: 8/26/82

position.

- 10) The date the valve is opened and the signature of the Employees opening the valve shall be placed on the "Fire Valve is Shut" card and returned to the Site Superintendent or designee.
- 11) The Site Superintendent or designee, the Area Supervisor or designee of the affected area, the Plant Guard, and ADT shall be notified that the sprinkler system is back into service.

GNS:jld doc. 144







# FIRE VALVES SHUT

AT	TACH	THIS TAG	TO	VAL	V E	,
VALVE 25			AG No		2	44
CONTROLLING:	<u> </u>	ैहिंद्दे हे — <u>— — — — — — — — — — — — — — — — — — </u>	· ·	·		<b>英智利</b>
SHUT ON:	·		19	23.4	7	A.A.
BY:	MONT	. 1- is		. · .	TIME	1374
TO BE SHUT ONLY UNTIL,	•	•	19		1,00	A.A P.M
REASON:	MONT	H DATE			TIME	() 関係
						1 (18)
AUTHORIZED BY						ė
OPENED BY:			FIRE CH	ŒF	·	Sur.
		·	10			A.M P.M
ON:			19			F./VI
R		HIS TAG TO	FIRE		TIME O F	
R	ETURN TI	VE IS	FIRE		0 F	F
FIRE VALVE	ETURN TI	VE IS	FIRE S H		0 F	
FIRE  VALVE NO.  CONTROLLING:	ETURN TI	VE IS	S H		0 F	F 44
FIRE VALVE	VAL	VE IS	FIRE S H		0F	F 4 4
FIRE  VALVE NO.  CONTROLLING:	ETURN TI	VE IS	S H		0 F	F 4 4
FIRE  VALVE NO. CONTROLLING: SHUT ON:	VAL	VE IS	S H		0F	F 4 4
FIRE  VALVE NO.  CONTROLLING: SHUT ON: BY: TO BE SHUT	VAL	VE IS	S H  AG NO		0F	F 44
FIRE  VALVE NO. CONTROLLING: SHUT ON: BY: TO BE SHUT ONLY UNTIL;	VAL	VE IS	SH AG NO	UT	0 F	F 44
FIRE  VALVE NO. CONTROLLING: SHUT ON: BY: TO BE SHUT ONLY UNTIL: REASON:	VAL	VE IS	S H AG NO.	UT	0 F	44 4.4
FIRE  VALVE NO. CONTROLLING: SHUT ON: BY: TO BE SHUT ONLY UNTIL: REASON: AUTHORIZED BY:	VAL	VE IS	SH AG NO	UT	0 F	F 44

SAMPLE INSPECTION TICKLER

SUB C
DEPT DEPT FREQUENCY D BLDG DUE DATE TICK NO INSP NO 10 M1 WEEKLY 2 07/01/82 03 0001

DESCRIPTION

INSP. FIRE PUMP 5-14 (SH-0020)

OK NG ACTION

INSPECTED BY

TUODEOTTON DATE

INSPECTION DATE

184-6 HAZARDOUS WASTE STORAGE / TREATMENT FACILITY INSPECTION.

10 005041243

	П	Problems	Rememal			္ ယ				STAGING	Diety Wash	
ITE TIME		OBSERVED	ACTION	WSTE, PAINT	Wste. Flam.	Wate . Flam.	MT Chrom. bass-NIR	Others	OTHERS	عمدلا	SOLVENT	
25 26 27 28 29 30	X -	DK 4.0-	<i>ರಾ</i> ಒ∈		,		192 DRS.	H70/ + H20 /DR H A7/S CONT H20				763.es
3 4 4 6 7 8		9X	Non E	15000 #	/000 #		195DRS.	Asbesti 92 DRS. CONT. H20 HPT'S	H72NH20 1 DR.		22000G.	790es SY ARS 760RS
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# RADIO IDENTIFICATION NUMBERS TELEPHONE TO TWO-WAY RADIO'S

NOTE: DIAL 4780 (WAIT FOR DIAL TONE).

\* LINE MAY BE BUSY - HANG UP - AND TRY AGAIN.

WHEN DIAL TONE STOPS, ASK FOR PARTY. EXAMPLE --- EXTENSION 4832 TO UNIT 15.

\*\* IF PHONE CONTINUES TO RING FOR AN EXTENDED PERIOD OF TIME, SYSTEM IS BEING USED BY SOMEONE ELSE.
HOLD UNTIL RINGING STOPS, THEN START CONVERSATION.
CONVERSATION MUST BE COMPLETED WITHIN 5 MINUTES. THE SYSTEM IS DESIGNED TO SHUTDOWN AUTOMATICALLY AFTER 5 MINUTES.

AT END OF CONVERSATION, PRESS (#) KEY ON PHONE AND HANG - UP.

## RADIO UNIT NUMBERS

	MIDIO ONLL NONDEND	
	PLANT MANAGERCOMMUNICATION / PUBLIC AFFAIRS COORD.	s. J. BRIGHT
3.	MECHANICAL SUPERVISOR (ELECTRICAL) "J" CONTROL ROOM - EMERGENCY UNIT	R. HAEFNER
5.	SERVICE SUPERVISOR	R. SHEEHY
	RECEIVING/SHIPPING (TO BE USED AS AN AREA	
	MECHANICAL SUPERVISOR	K. HOHLBEIN
	MECHANICAL SUPERVISOR	J. D. HART
9.	ENAMEL'S 1ST FLOOR (FILLING)	AL STUDER
		BILL MALASPINA
	ENAMEL'S 2ND FLOOR (MIXING)	
10.	ENAMEL'S 2ND FLOOR (MIXING)	MIKE COOK
		SUE HERBSTER
11.	ENAMEL'S 3RD FLOOR (GRINDING)	JOHN MILLER
12	SHIPPING CHECKER'S J. BICK RESIN AREA SUPERVISOR'S	Z / TO WINGATE
13.	DEGIN ADEA GUDEDUTGODEG	E C EXPER
14.	KEPIN WKEW POLEKATPOK P	CORPUE BLACK
15	MECHANICAL AREA COORDINATOR	GEORGE CROSS
16.	K-BLDG. EMERGENCY UNIT	OBOROS OROBB
-	CONTRACTOR'S GATE UNIT (G-1) ASK FOR CONTRA	ACT GATE
	SHIFT MECHANIC	

NOTE: WHEN CALLING FOR SECURITY THAT IS WORKING THE CONTRACT GATE, USE THE CALL LETTER UNIT G, FOLLOWED BY CONTRACT GATE. FOR EXAMPLE, UNIT 22 TO UNIT G "CONTRACT GATE".

19. LABEL ROOM OPERATOR

22. RECEIVING PUMPER

20. ENGINEERING-NOT IN USE 21. FIRE TRUCK/FIRE PROTECTION

UNIT G---PLANT GUARD (MAINGATE)
UNIT G-1--PLANT CONTRACT GATE (DAYS)

UNIT "6" WILL STILL BE ASSIGNED TO THE RECEIVING/SHIPPING AREA BUT WILL NOT BE CARRIED. RADIO WILL ONLY BE USED AS NEEDED. H. DUNN WILL NEED TO BE CONTACTED BY HIS PERSONAL PAGER.

(Mike Burton--Breeze)

C. GOULDING

E. JACOBS

# PAGE BOY CARRIERS TELEPHONE TO PAGERS PROCEDURES

## PAGE BOY PROCEDURES:

- 1. DIAL 4710 (WAIT FOR A SINGLE BEEP) --LINE MAY BE BUSY, IF SO, WAIT A FEW MINUTES AND TRY AGAIN.
- 2. DIAL NUMBER OF PAGER, AFTER YOU HEAR A SERIES OF BEEPS, STATE YOUR MESSAGE (TWICE). YOU HAVE 15 SECONDS FROM THE TIME OF THE LAST BEEP TO COMPLETE YOUR MESSAGE.

PAC	GE NUMBERS
65	BALCOM LARRY
15	BAKER JIM
58	23BOWDEN WILLTEMP. 23 TO 58
56	CAILI DAVE
52	CURRALL GARY
	DEMARSCIO HANK
	GLEASON TIM
25	62HAMEL PETE (MECHANICAL)
60	HAMMOND JOE
32	HAYES CHRIS
43	25HUDSON GENE
	JARUSIEWICZ WALT
14	KUBICZ JOHN
64	NOT IN SERVICE
51	MALEK JOE (SUPERVISOR TOTE-TANK CLEANING)
21	68MAYS CLYDE (SALES DEV. LAB. HELPER)
51	McHUGH PAT
53	PARCHOMENKO TONY
57	PILE MIKE
54	SILVA ROBERT
24	
42	STARKEY DAVE (SAFETY/HEALTH COOD.)
63	THURLOW TOM
71	WARD FLOYD
45	Weber Carol(44 pages to 45New Lab Helper)
64	Janitor Ricky Johnson

Safety Procedure # 45

Date: September 7, 1979

Superseding Date: New

Written By: R. J. Baird

Subject: POWERED VEHICLE INSPECTIONS

Approved By: Min

## INTRODUCTION

This procedure is designed to provide a method of vehicle inspection consistent with Plant safety requirements and OSHA regulations. Powered vehicles are defined as follows:

- 1. Fork Truck (gas or electric)
- 2. Transporters
- Transtacker 3.
- 4. Company cars and trucks
- 5. Tractors
- 6. Bobcats
- Etc.

## OUTLINE

- A. Plant Safety Requirements
- B. Legal Requirements and Inspection Frequency
- C. Method of Inspection
- Record Keeping D.

#### DETAIL

#### Plant Safety Requirements Α.

- No piece of powered equipment shall be operated when in an unsafe condition.
- All substandard equipment is to be tagged out and brought to the immediate attention of supervision.
- Before operating equipment, operators must see that the equipment has been inspected according to the proper timetable and assure themselves that the equipment is still in a safe operating condition.
- Drive only equipment you are qualified to operate.

# Legal Requirements and Inspection Frequency

- 1. All powered equipment must be inspected before use.
- 2. Records must be maintained for a period of 30 days.
- 3. Frequency of inspections required as follows:
  - a) All fork lifts, transporters, transtackers, etc., must be inspected prior to use on every shift.
  - b) Company cars, trucks, tractors, etc., need to be inspected each day before use

<b>L</b> - 17	Safety Procedure # 45	Date: 9/7/79
		C D AL-

New

S.D.:

# Methods of Inspection

Form (attached) is to be followed and checked as inspected.

- Inspect all items on the checklist as applicable to the vehicle being 2. inspected.
- A short "test drive" will be necessary to complete the checklist.

#### D. Record Keeping

- Completed checklists are to be displayed on the equipment during the time span the inspection covers.
- 2. Expired checklists are to-be removed from the equipment and turned in to the responsible foreman.
- Foreman are to review checklists as they are turned in to make certain they are being done. Initial the expired checklists.
- Expired checklists should be displayed in or near the foreman's office for a period of one day for auditing purposes.
- Expired checklists must be filed after one day and retained for 30 days.

RJB:jd



# . I. DU PONT DE NEMOURS & COMPANY

#### TOLEDO, OHIO 43695

**AUTOMOTIVE PRODUCTS DEPARTMENT** 

4**43** OHD 005 041 **863/**03-48-0195

> CC: Tyler Ruggles, NWDO Lisa Pierard, Region V

> > August 13, 1991

MEGENTEN

CFFICE OF

Mr. Tom Crepeau Ohio EPA, DSHWM 1800 WaterMark Dr. Columbus, Ohio 43266-0149

ar Mr. Crepeau:

As indicated in my letter of June 28, the balance of the Completeness/Technical Adequacy revisions to our Part-B submission would be forthcoming as soon as possible.

Enclosed please find our revised Sections G and I.

Yours truly,

Arthony Parchomenko

Environmental Coordinator

#### G. CONTINGENCY PLAN

#### Table of Contents

Page No. Sub ject G-3General Description G-6 **Emergency Coordinators** G-16 Letter to Directors of Emergency Services of St. Vincent Hospital Toledo Hospital Mercy Hospital G - 20History of Prior Spills G - 21Preparedness and Prevention Plan--Safety Procedure No.18. Attachment G-1a-1 Emergency Control Philosophy and Disaster Control Organization -- Safety Procedure No. 19.

## Attachment G-1b-1

Emergency Control Plan for Fire Alarm, Explosion, and Other Internal Incidents—Safety Procedure No.19-A.

#### Attachment G-1c-1

Emergency Control Plan for Weather Emergencies—Safety Procedure No.19-B.

#### Attachment G-1d-1

Emergency Control Plan for Civil Disorders—Safety Procedure No.19-C.

#### Attachment G-1e-1

Emergency Control Plan for Industrial Incidents External to the Plant--Safety Procedure No.19-D.

#### Attachment G-1f-1

Emergency Control Plan for Deliberate Damage--Safety Procedure No.19-E.

#### Attachment G-1g-1

Handling Chemicals and Hazardous Materials—Safety Procedure No.22.

#### Attachment G-1h-1

Spill Prevention Control and Countermeasure Plan-Safety Procedure No.42.

OHD 005 041 846 / 03-48-0195 Revised 11-19-87; 06-28-91

Attachment G-1i-1

Pollution Complaint Handling Procedures—Standard Practice No.V-9.

Attachment G-1,j-1

Fire Alarm Control Board - Inspection and Testing

Attachment G-1k-1

Fire Pumps - Inspection and Testing

Attachment G-11-1

Automatic Sprinkler System Pluggage Test

Attachment G-1m-1

Automatic Sprinkler System - Annual Full Flow Drain Test

Attachment G-1n-1

Automatic Sprinkler System Dry Pipe Valves

Attachment G-10-1

Sprinkler Control Valve (PI) - Inspection and Testing

Attachment G-1p-1

Fire Extinguisher Inspection

Attachment G-1q-1

Sectional Control Valve - Inspection and Testing

Attachment G-1r-1

Fire Hydrant Inspection

Attachment G-1s-1

Underground Fire Main - Hydrostatic Test

Attachment G-1t-1

Fire Doors - Inspection

Attachment G-lu-1

Dry Chemical Extinguisher System (REF F6A)

Attachment G-4c

Identification of the Health, Fire and Reactivity Hazards of Materials.

- G. CONTINGENCY PLAN: OAC 3745-50-44(A)(7), 3745-54-50 thru 3745-54-56.
  - AS SPECIFIED UNDER OAC 3745-54-51-PURPOSE AND IMPLEMENTATION OF CONTINGENCY PLAN
  - (A) EACH OWNER OR OPERATOR SHALL HAVE A CONTINGENCY PLAN FOR
    THE FACILITY. THE CONTINGENCY PLAN SHALL BE DESIGNED TO
    MINIMIZE HAZARDS TO HUMAN HEALTH OR THE ENVIRONMENT FROM
    FIRES, EXPLOSIONS, OR ANY UNPLANNED SUDDEN OR NON-SUDDEN
    RELEASE OF HAZARDOUS WASTE OR HAZARDOUS WASTE CONSTITUENTS
    TO AIR, SOIL, OR SURFACE WATER.
  - (B) THE PROVISIONS OF THE CONTINGENCY PLAN SHALL BE

    IMPLEMENTED IMMEDIATELY WHENEVER THERE IS A FIRE,

    EXPLOSION, OR RELEASE OF HAZARDOUS WASTE OR HAZARDOUS

    WASTE CONSTITUENTS WHICH COULD THREATEN HUMAN HEALTH OR

    THE ENVIRONMENT.

GENERATION OF HAZARDOUS WASTE AT THIS SITE IS INCIDENTAL TO THE MANUFACTURE OF AUTOMOTIVE COATINGS. THE HANDLING OF NORMAL PRODUCTS AND THE INCIDENTAL HAZARDOUS WASTE IS GENERALLY THE SAME.

This SITE'S plan is a combination of several previously existing procedures that encompass the actions to be taken in response to any "disaster" on the plant--fire, explosion, spill, vapor release, major accident, etc. The designation of certain materials as hazardous wastes under RCRA requires absolutely no change in OUR EMERGENCY RESPONSE PROCEDURES. ALL OF THE SITE'S PROCEDURES ARE AIMED AT PROPER HANDLING OF CHEMICALS, INCLUDING HAZARDOUS WASTE. The "Emergency Control Plan A-Fire, Explosion and Other Internal Incidents" (Procedure No.19-A, attachment G-1b-1), [.In addition, a] Spill Prevention and Countermeasures (SPCC) Plan

OHD 005 041 847 / 03-48-0195 Revised 11-19-87; 06-28-91

(attachment G-1h-1) [is] in existence because of the site's NPDES permit, [.The] Prevention and Preparedness Plan (PPP, Procedure No.18, page G-21) and several other specific plans are also attached.

UNDER THIS SITE'S GUIDELINES, THE PLANT WIDE ALARM SYSTEM IS
ACTIVATED BY ANY EMPLOYEE THAT BELIEVES THAT AN EMERGENCY CONDITION
EXISTS AFTER OBSERVING A SPILL, A FIRE, OR A VAPOR CLOUD, OR OTHER
EMERGENCY CONDITION. THE INTENT OF OUR PROCEDURES IS TO PREVENT
HARM TO EMPLOYEES, BUILDINGS AND EQUIPMENT, AND OFF-SITE HUMAN
HEALTH AND THE ENVIRONMENT. ACTIVATION OF THE ALARM BRINGS
EMERGENCY RESPONDENTS TO THE SCENE, AT WHICH TIME A DECISION ON ANY
FURTHER ACTION IS MADE. THE DECISION DOES NOT ALWAYS RESULT IN A
PLANT WIDE IMPLEMENTATION OF THE CONTINGENCY PLAN (EMERGENCY
RESPONSE PROCEDURES).

A SPILL OF AS LITTLE AS 5 GALLONS OF A CHEMICAL INSIDE AN OPERATING BUILDING COULD RESULT IN AN ALARM, WHILE A SPILL OF 55 GALLONS OR MORE INSIDE A SECONDARY CONTAINMENT SYSTEM (ALL OUTSIDE STORAGE TANKS, NOT JUST HAZARDOUS WASTE TANKS, ARE EQUIPPED WITH SECONDARY CONTAINMENT) WOULD NOT NECESSARILY RESULT IN AN ALARM.

ALSO SEE SECTION G-3, IMPLEMENTATION

HAZARDOUS MATERIALS RESULTING FROM AN EMERGENCY WILL BE TREATED,

STORED AND DISPOSED OF AS OUTLINED IN SECTION G-4F.

INCOMPATIBLE WASTE WOULD BE HANDLED AS OUTLINED IN SECTION G-4G.

EMERGENCY EQUIPMENT USED WOULD BE CLEANED AS OUTLINED IN SECTION
G-5.

#### G-1. General Information. OAC 3745-54-52

This plan and all attachments provides emergency response procedures for the following DuPont owned and operated manufacturing plants:

E.I. du Pont de Nemours & Co., Inc.
Automotive Products Department
1930 Tremainsville Road
Toledo, Ohio 43613
Lucas County
EPA ID No. OHD005041843/03-48-0195

A site plan is included AS ATTACHMENT B-2a-1 IN SECTION B.

The plant produces a wide variaty of paints and other surface coating materials for the automotive industry. In conjunction with the Hazardous Wastes (HW) generated as a result of paint production, the site operates a HW container storage pad and several HW storage tanks (see site plan for locations).

#### G-2. Emergency Coordinators OAC 3745-54-52(D)

As outlined in the Emergency Organization (Procedure 19-A), the coordinator on the day shift is the production superintendent (alternates are Paint area and Technical supervisors). At night, the Control Laboratory supervisor will act as coordinator until the primary coordinator (or alternate) can be called into the site. The current list of coordinators is included (page G-7 and G-8).

The coordinators have the responsibility and authority from the

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plant manager to promptly commit plan forces and resources—and to call in outside assistance as need (city, state or contractor forces)—to adequately deal with any emergency situation.

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#### EMERGENCY COORDINATORS

PRIMARY COORDINATOR ERIC G. MELIN: PRODUCTION SUPERINTENDENT

OFFICE PHONE(FROM IN PLANT) OFFICE PHONE(FROM OFF PLANT)

ON PLANT RADIO UNIT NO.

HOME PHONE NUMBER

SPEED CALL IN NO. (FROM IN PLANT) :22

24 HOUR SKY-PAGE NO.

:470-1769

: CONTROL

:4769

:1-800-759-7243

ALTERNATE COORDINATOR GEORGE E. CROSS; MAINTENANCE COORDINATOR

# on-respons

OFFICE PHONE (FROM IN PLANT) OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO. HOME PHONE NO.

SPEED CALL IN NO. (FROM IN PLANT)

OFF PLANT PAGER NO.

:4782 :470-1782

CONTROL

: 2.1 :479-0002

ALTERNATE COORDINATORS OFF SHIFTS ON SITE

FRANK G. FABER; RESIN SUPERVISOR

OFFICE PHONE (FROM IN PLANT) OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO.

HOME PHONE NO.

24 HOUR SKY PAGER NO.

:4730

:4730

:470-1730

:470-1730

:1-800-562-7243

STEVEN BLACK SR.; RESIN SUPERVISOR

# **-respons**

OFFICE PHONE (FROM IN PLANT)

OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO.

HOME PHONE NO. 24 HOUR SKY PAGER NO.

:1-800-562-7243

WILLIAM SZYMANSKI; BRIGADE CAPTAIN

OFFICE PHONE (FROM PLANT)

OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO. HOME PHONE NUMBER

:4853

:470-1853 :CONTROL

THOMAS MCLAUGHLIN, BRIGADE CAPTAIN

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# Non-responsive

OFFICE PHONE (FROM PLANT)

OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO.

HOME PHONE NUMBER

:4853

:470-1853

:CONTROL

Jon-responsive

JOHN WEAVER, BRIGADE CAPTAIN

# Non-responsive

OFFICE PHONE (FROM PLANT)

OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNIT NO.

HOME PHONE NUMBER

:4875

:470-1875

: CONTROL

Non-responsive

ROBERT O. JASSEN, BRIGADE CAPTAIN

# Non-responsive

OFFICE PHONE (FROM PLANT)

OFFICE PHONE (FROM OFF PLANT)

ON PLANT RADIO UNUT NO.

HOME PHONE NUMBER

:4875

:470-1875

CONTROL

Non-responsiv

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The plan is implemented by pulling any fire alarm box—even if the disaster is not a fire (the response is the same). Teams respond,[and] the Disaster Chief AND THE EMERGENCY COORDINATOR make[s] an evaluation of the situation (radio communication is essential here). The Coordinator then DETERMINES AND implements [further action] THE EMERGENCY RESPONSE PROCEDURE as appropriate (call—ins, fire department, evacuation, etc.). The philosophy of reacting promptly when in doubt assures full implementation when the incident is significant. Drills are held regularly to assure all personnel are familiar with their role and response.

#### G-4. Emergency Response Procedures

#### G-4a. Notification

The Gamewell fire alarm system has multiple horn/bell locations audible throughout the site which give a signal indicating location of box pulled. The plant radio system (outlined in Procedure 19-A under Communications) is used for notification and feed back. The designated supervisors and managers in the plant carry these radios at all times as part of normal plant communications. The guards have an accelerated speed call-in system if the primary coordinator and other management personnel are not on site (4:30 p.m. to 8:00 a.m. or shut-down days). The guards also have THE numberS of offsite response agencies to call.

#### G-4b. Identification of Hazardous Materials

Essentially all raw materials, intermediates, finished products and HW on the site are hazardous for the same reason: <u>ignitability</u> (See Procedure No.22). No other property of these wastes is pertinent for THE INITIAL emergency response. Fire\_and/or\_explosion is the [only] PRIMARY concern. <u>FOR EMERGENCY RESPONSE</u>, ONLY THE HAZARD OF SMOKE INHALATION AND BURNS DUE TO THE IGNITABILITY CHARACTERISTIC OF THE SITE'S HAZARDOUS WASTE NEED TO BE CONSIDERED.

#### G-4c. Assessment

The potential hazards FROM HW to human health involve only burns and smoke inhalation. No procedures involving neighbors or street traffic would be required other than normal City of Toledo fire/police activity at a fire scene. On the plant fire brigade response (outlined in Procedure 19-A) will be adequate to extinguish all but the largest fires; City of Toledo Fire Department will be called if there is any fire not immediately extinguished by operators. The Emergency Coordinator, in consultation with the Disaster Chief and the [Solid Waste] ENVIRONMENTAL Coordinator, will call the National Response Center (1-800-424-8802) and Ohio EPA contacts (1-800-282-9378) for discharges under the Clean Water Act, RCRA or CERLA (Superfund) as appropriate.

Procedure No. 7 (attachment G-4c) explains tank markings which provide easy recognition of health, fire and reactivity hazards. These are NFPA national standards and known to outside fire department personnel.

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#### G-4d. Control Procedures

The types of equipment available (See Procedure No.18, page G-20) and specific procedures to follow are detailed in [Section G-5 and] the attached plant Safety Procedures Nos. 18, 19-A, 22, and 42)[, the PPP and Standard Practice No. V-10).]

#### G-4e. Prevention of Reoccurrence of Spread of Fires, Explosions or Releases

The use of water and/or foam to suppress fires and remove the source of ignition will prevent further danger from fires. All operations (except resin kettles) are stopped when the alarm is sounded and all personnel evacuate if not on a specific response team. An immediate investigation is instituted to determine the cause. Any spilled waste will be pumped to drums or contractor tank wagons.

#### G-4f. Storage and Treatment of Material

No treatment would be required for material resulting from emergency incidents at the site. The ignitable material would normally be drummed or put into portable tanks and placed in container storage. If large quantities of water contaminated with organics is generated, a contractor tank wagon/vacuum truck would be utilized. Temporary storage during cleanup could be done at the vacant area behind the garage or pavement in front of the warehouse if the storage pad was the location of the incident.

### G-4g. Incompatible Waste

There is normally no incompatible waste on the site. If any should be generated, drums would be segregated at the end of the storage pad. ACTIVE CONTRACTS ARE IN PLACE ON A STAND-BY BASIS JUST IN CASE. If the pad was involved in the incident, temporary storage of drums could be done behind the garage or on pavement in front of the finished product warehouse.

## G-4h. Post-Emergency Maintenance

Normal plant procedures require replacement of fire extinguishers after use, dry and replace hoses, resupply foam, refill air bottles for Scott Airpacks, etc. Many reserve items are in storage and would be in service while refurbishing and replenishing equipment.

#### G-4i. Container Spills and Leakage OAC 3745-55-71

The ENCLOSED [attached] procedure[s] NO.42, "SPILL PROCEDURE" outlined equipment to be used, safety precautions to be taken, and responsibility for spill clean up. Any damaged or leaking HW containers found AT ANY TIME [during the weekly inspection] are to be repaired (new bung gaskets, etc.) or re-drummed at once (same shift). Spills are investigated for future prevention and operators disciplined if negligent.

#### G-4j. Tank Spills and Leakage

The same procedures apply to tank overflow or leaks. The [two] THREE (3) large outside HW tanks are in individual dikes which can be pumped out to A TANK WAGON OR portable tanks if a spill occurs. SPILLED HAZARDOUS WASTE WOULD ULTIMATELY BE DISPOSED OFF AT AN APPROVED INCINERATION SITE.

#### 1. OAC 3745-55-96(A)

WHENEVER A SPILL OR LEAK OF HAZARDOUS WASTE TO A TANK OR
SECONDARY CONTAINMENT SYSTEM IS DETECTED, IMMEDIATE ACTION WILL BE
TAKEN TO STOP THE SPILL OR LEAK AND AN INSPECTION CONDUCTED TO
DETERMINE THE CAUSE.

#### 2. OAC 3745-55-96(B)

AS MUCH OF THE WASTE AS IS NECESSARY TO PREVENT FURTHER RELEASE OF HAZARDOUS WASTE TO THE ENVIRONMENT AND TO ALLOW INSPECTION AND REPAIR OF THE TANK SYSTEM, WITHIN 24 HOURS AFTER DETECTION OF THE LEAK, OR, IF NOT POSSIBLE, AT THE EARLIEST PRACTICABLE TIME, WILL BE REMOVED.

ANY RELEASE OF HAZARDOUS WASTE FROM A TANK INTO THE SECONDARY
CONTAINMENT SYSTEM WILL BE REMOVED WITHIN 24 HOURS OR IN AS TIMELY
A MANNER AS IS POSSIBLE TO PREVENT HARM TO HUMAN HEALTH AND THE
ENVIRONMENT.

#### 3. OAC 3745-55-96(C)

A VISUAL INSPECTION OF THE RELEASE WILL BE CONDUCTED IMMEDIATELY AND, BASED UPON THAT INSPECTION:

MIGRATION OR FURTHER MIGRATION OF THE LEAK OR SPILL TO SOILS OR SURFACE WATERS, IF ANY, WILL BE SHUT OFF.

VISIBLE CONTAMINATION, IF ANY, OF THE SOIL OR SURFACE WATER

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WILL BE REMOVED AND DISPOSED OF.

5. OAC 3745-55-96(E)

IF THE CAUSE OF THE RELEASE WAS A SPILL THAT DID NOT DAMAGE THE INTEGRITY OF THE SYSTEM, THE SYSTEM WILL BE RETURNED TO SERVICE AS SOON AS THE RELEASED WASTE IS REMOVED AND REPAIRS, IF NECESSARY, WILL BE MADE.

IF THE CAUSE OF THE RELEASE WAS A LEAK FROM THE PRIMARY TANK
SYSTEM INTO THE SECONDARY CONTAINMENT SYSTEM, THE SYSTEM WILL
BE REPAIRED PRIOR TO RETURNING THE TANK SYSTEM TO SERVICE.

#### G-4k. Waste Piles

There are no waste pile on this site.

#### G-5 Emergency Equipment

Spill control equipment CARTS [lockers] are located in various operating areas. Absorbent material is located in drums at the SPILL CONTROL EQUIPMENT CARTS AND AT THE container storage pad. The attached Prevention and Preparedness Plan (PPP) has a list of the fire protection equipment. All emergency equipment, contaminated process equipment, and personnel and protective gear will be decontaminated and any hazardous waste will be properly disposed of.

DECONTAMINATION OF PAINT/PAINT RELATED CONTAMINATED PERSONNEL AND EQUIPMENT:

 PERSONNEL DECONTAMINATION--SHOWER WITH PROTECTIVE CLOTHING ON TO REMOVE EXCESS CONTAMINANT, REMOVE CLOTHING UNDER SHOWER, CONTINUE SHOWER WITH SOAP TO REMOVE ANY CONTAMINANT 3 OHD 005 041 84\$ / 03-48-0195 Revised 11-19-87; 06-28-91

ON BODY. USE MINERAL OIL TO REMOVE ANY CONTAMINANT ON BODY
THAT WAS NOT REMOVED BY SHOWER. CONTAMINATED CLOTHING IS
EITHER DISCARDED OR SENT TO AN INDUSTRIAL LAUNDRY, DEPENDING
ON EXTENT OF CONTAMINATION.

EQUIPMENT DECONTAMINATION--WASH WITH AN APPROPRIATE SOLVENT TO REMOVE CONTAMINANT, THEN WITH SOAP AND WATER TO REMOVE THE SOLVENT.

#### G-6. Coordinator Agreements

The City of Toledo fire, rescue, and police units are obligated to respond when called by the plant. No written agreement exists, is needed or desired. The fire department is invited to tour the site at least annually for familiarization with potential fire hazards and our internal fire hazards capabilities. We have hydrant fittings, etc. which are fully compatible with the city equipment.

THIS YESR, A COMBINED PLANT, TOLEDO FIRE AND RESCUE, STATE FIRE MARSHALL, AND THE LEPC DRILL WAS IN FACT CONDUCTED AT THIS SITE.

Since fire is the only emergency situation our HW could be involved in, the only response unit that is in need of familiarization is the Toledo Fire Department and Rescue Squad (see discussion in Section E of the attached PPP).

LOCAL HOSPITALS ARE PERIODICALLY NOTIFIED AND ARE AWARE OF THE TYPES OF INJURIES TO EXPECT DUE TO HW INVOLVEMENT.

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June 28, 1991

Director of Emergency Services St. Vincent Hospital 2213 Cherry St. Toledo, Ohio 43608

Director of Emergency Services Toledo Hospital 2142 North Cove Blvd. Toledo, Ohio 43606

Director of Emergency Services Mercy Hospital 2200 Jefferson St. Toledo, Ohio 43624

Dear Sir or Madam:

As part of our responsibility under the Resource Conservation and Recovery Act of 1976, we are notifying you of the types of hazardous waste we have stored on our plant site and the types of injuries you might be called upon to treat, should an emergency incident occur involving this waste.

We have interim permission to store hazardous waste in containers and tanks prior to recovery or off-site disposal, and are applying for an Ohio permit to continue this practice permanently. These wastes and the storage practices are not new to our site, but result from our overall operations over the past 60 years.

The primary hazardous characteristic of these wastes is ignitability. Therefore, the primary danger to persons and the injuries you might be called upon to treat in an emergency is burns. Smoke inhalation is another possibility as with all fires. The level of toxicity for these products of combustion is not considered to be abnormal.

If you would care to visit our site (as the City of Toledo Fire Department does annually) for familiarization with our emergency response capabilities and procedures, we would welcome you.

Please contact myself or our Plant Physician, Dr. J. R. Stevens to discuss this matter or to arrange a visit.

Very truly yours,

Eric G. Melin Plant Manager

For E. I. duPont deNemours and Company

#### G-7 Evacuation Plan

Upon implementation of Emergency Control Plan A (fire alarm signal), assigned personnel respond to their tasks (fire brigade, first aid personnel, coordinators, etc.). All other personnel evacuate to non-operating areas at the front of the plant for a head count. Visitors and contractors must report to the [gate house] SAME AREA for a head count by [the guards] PERSON IN CHARGE. All personnel are aware of alternate stairways and routes from the operating areas, DEPENDING ON THE SIGNAL SOUNDED.

THIS PLANT IS BASICALLY A NUMBER OF OPERATING AREAS/FLOORS
IDENTIFIED AS SEPARATE BUILDINGS/FLOORS. THE BUILDINGS ARE
SEPARATED BY FIRE WALLS. THERE IS A TOTAL OF 16 FIRE ALARM SIGNAL
BOXES LOCATED STRATEGICALLY THROUGHOUT THE PLANT.

THE INTENT OF AN EMERGENCY EVACUATION IS TO PREVENT INJURY TO PERSONNEL AND TO LIMIT DAMAGE TO BUILDINGS AND EQUIPMENT. DUE TO THE COMPACTNESS OF THE SITE, THE NUMEROUS EXITS AVAILABLE, AND THE NUMBER OF FIRE ALARM SIGNAL BOXES IN EXISTENCE, THE PRESCRIBED EVACUATION ROUTE IS TOWARD THE GATHERING LOCATION IN THE CAFETERIA (FRONT OF PLANT) BUT AWAY FROM THE SIGNAL BOX ACTIVATED.

THEREFORE, OUR PRIMARY EVACUATION ROUTE IS AWAY FROM THE SIGNAL BOX ACTIVATED THROUGH ANY OF THE OTHER EXITS/PATHS AVAILABLE, BUT TOWARD THE GATHERING LOCATION IN THE CAFETERIA. IF ALARM #1-1-4 IS PULLED AND THE CAFETERIA BUILDING IS INVOLVED IN THE EMERGENCY, THE RALLY POINT WILL BE THE S.E. AREA OF THE MAIN PARKING LOT.

THE ALTERNATE EVACUATION ROUTE IS THE SAME AS OUR PRIMARY EVACUATION ROUTE; EVACUATE AWAY FROM THE SIGNAL BOX ACTIVATED THROUGH ANY OF THE OTHER EXITS/PATHS AVAILABLE, BUT TOWARD THE

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GATHERING LOCATION IN THE CAFETERIA.

DESCRIPTION OF THE SIGNALS USED TO BEGIN EVACUATION, IS LISTED IN OUR SAFETY PROCEDURE NO. 19, PARAGRAPH II-C-3.

#### G-8. Required Reports OAC 3745-54-56(J)

IF A significant incident involving HW OCCURS, requiring the implementation of the Contingency Plan, A WRITTEN REPORT SHALL [must] be SUBMITTED [reported] to the [Regional Administrator (USEPA, Region V, 111 West Jackson Blvd., Chicago, IL 60604)] DIRECTOR OF OHIO EPA within 15 days. Information required is outlined at OAC 3745-54-56(J) [40 CFR 264.56(j)].

- (1). NAME, ADDRESS, AND TELEPHONE NUMBER OF THE OWNER/OPERATOR;
- (2). NAME, ADDRESS, AND TELEPHONE NUMBER OF THE FACILITY;
- (3). DATE, TIME, AND TYPE OF INCIDENT (E.G., FIRE, EXPLOSION);
- (4). NAME AND QUANTITY OF MATERIAL(S) INVOLVED;
- (5). THE EXTENT OF INJURIES, IF ANY;
- (6). AN ASSESSMENT OF ACTUAL OR POTENTIAL HAZARDS TO HUMAN HEALTH OR THE ENVIRONMENT, WHERE THIS IS APPLICABLE;
- (7). ESTIMATED QUANTITY AND DISPOSITION OF RECOVERED MATERIAL THAT RESULTED FROM THE INCIDENT; AND
- (8). ANY OTHER INFORMATION AS THE DIRECTOR MAY REQUIRE.

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<u>G-9.</u>		<u>Hist</u>	ory of Prior	<u>Spills</u>		
Spil	1 #	Date	Material	Amount	Cause	Disposition
125	07/2	6/90	Paint-	3 Gals.	Open Valve	No Enviro.Effect
126	08/1	4/90	Paint	6 Gals.	Open Valve	No Enviro.Effect
127	08/2	9/90	Wash Slvnt.	11 Gals.	Open Valve	No Enviro.Effect
128	10/1	1/90	Xylene	35 Gals.	Open Valve	No Enviro.Effect
129	10/1	4/90	Scrub Water	300 Gals.	Open Valve	No Enviro.Effect
130	10/3	1/90	Paint	15 Gals.	Open Valve	No Enviro Effect
132	10/2	9/90	Xylene	150 Gals.	Opr.Error	See text

Approximately 150 gallons of recovered xylene was processed into the wrong storage tank over approximately a 15 minute time period. The xylene discharged through the tank vent onto the building roof and via the roof drain into the municipal sanitary sewer.

The overflow occurred when an operator started up the Thin Film Evaporate into a storage tank that had been almost filled the previous Friday. Operator did not check the valves, but assumed that she was processing into the proper tank, and went for break.

The spill was detected promptly by another operator and the system was shut down.

It is estimated, based on the period of time that the operator was absent from the area, that a maximum of 150 gallons was discharged before the system was shut down.

The City of Toledo Environmental Services Agency and the local U. S. Coast Guard Office were notified. They appeared satisfied with the action the plant had taken. No apparent environmental damage resulted from this upset.

131	11/06/91	Paint	35	Gals.	Lift Truck	No	Enviro	Effect
133	11/13/90			Gals.	Opr.Inatn.		Enviro	
	•				_			
134	11/26/90	Wash Solvnt	3	Gals.	Equip.Melfnct	No	Enviro	Effect
135	01/17/91	Wash Solvnt	25	Gals.	Opr.Inatn.	No	Enviro	Effect
136	02/10/91	Paint	30	Gals.	Opr.Inatn.	No	Enviro	Effect
137	03/22/91	Paint	- 3	Gals.	Equip.Melfnct	No	Enviro	Effect
138	04/04/91	Paint	15	Gals.	Equip.Melfnct	No	Enviro	Effect
141	04/21/91	Paint	, <b>5</b> ,	Gals.	Opr.Inatn.	No	Enviro	Effect
139	04/26/91	Paint	4	Gals.	Equip.Melfnct	No	Enviro	Effect
140	05/02/91	Paint	10	Gals.	Opr.Inatn.	No	Enviro	Effect
142	05/09/91	Wash Solvnt	10	Gals.	Opr.Inatn.	No	Enviro	Effect
143	05/09/91	Wash Solvnt	40	Gals.	Opr.Inatn.	No	Enviro	Effect
144	05/16/91	Paint	50	Gals.	Opr.Inatn.	No	Enviro	Effect
145	05/24/91	Wash Solvnt	15	Gals.	Opr.Inatn.	No	Enviro	Effect
146	05/30/91	Paint	3	Gals.	Opr.Error	No	Enviro	Effect
147	05/28/91	Solvent	2	Gals.	Opr.Error	No	Enviro	Effect
148	06/24/91	Paint	220	Gals.	Opr.Inatn.	No	Enviro	Effect
149	07/12/91	Dowtherm	3	Gals.	Equip Failr	No	Enviro	Effect
150	07/18/91	Solvent	5	Gals.	Opr.Inatn.	No	Enviro	Effect
151	07/23/91	Paint	200	Gals.	Opr.Inatn.	No	Enviro	Effect
152	07/29/91		20	Gals.	Opr.Inatn.	No	Enviro	Effect

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SAFETY PROCEDURE NO.18
Part of RCRA Part-B Permit

Date June 28, 1982 S.D.August 16, 1982

Revised by: A.Parchomenko

Approved by: D. R. Azema

Subject: PREPAREDNESS AND PREVENTION PLAN

#### A. GENERAL

1. The primary purpose of this plan is to manage the facility safely without fires, explosions, injuries to employees or DAMAGE TO THE ENVIRONMENT. DuPont has traditionally maintained a safe working place with minimum accidents, spills or fires. This site has its own safety and occupational health audits AND ITS OWN RCRA AND ENVIRONMENTAL AUDITS. IN ADDITION, there are corporate audits. Hazardous waste rules as defined by RCRA add no new hazards or safety problems to our site.

#### B. Emergency Site Equipment

1. Hose Houses/Boxes

There are seven hose houses each with 200' to 300' of 2-1/2" hose and a hydrant connected to an eight inch water main. Three houses are on the east side of the plant and four are on the west side.

2. Emergency Foam/Fire Engine

This engine is equipped with containers to hold 400 gallons of AFFF-3%/ATC-6% foam and 300 gallons of water. It is kept in the fork truck maintenance garage. It can be used to fight fires anywhere on the facility, but is primarily intended to deliver foam to the dike systems in the tank farms when needed, and for such problems as brush fires in remote areas.

3. Water Cannons

There are seven permanently installed ground level water cannons capable of delivering a water stream at a great distance. Primarily intended for delivering water to roofs of buildings without having to have firefighters on the roofs. Three of these cannons are on the east side of the plant and four are on the west side.

4. One-Inch Hose Reels

There are 21 one-inch hose reels with fog nozzles located throughout the manufacturing buildings. These reels have 50' of hose which is sufficient to overlap the area covered by the adjacent reels. The nozzles spray water over the fire, cutting off oxygen supply to the fire.

5. Sprinklers

Buildings on the facility are protected by automatic sprinklers except the powerhouse, garage, storeroom, Mechanical storage building and gatehouse. The heads will

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normally rupture at 135F. These sprinklers help contain the fire until fire fighting crews arrive. All sprinkler systems are connected to ADT's control panel downtown who notify plant supervision and/or the City Fire Department which can be at the facility ready to fight the fire within a few minutes from the time the sprinkler head ruptures.

6. Fire Pump and Reservoir

We have a 80,000 gallon water reservoir at the Powerhouse. We also have two diesel fire pumps connected to the 80,000 gallon reservoir and can pump 1,500 gpm of water, if needed at 125 psig.

Additionally, we are connected to the City water supply which can be used either directly or to replenish the reservoir.

7. Automatic Dry Powder Systems

There are (10) systems located at various scale pipe headers in the plant. Three are in the paint manufacturing building, one in No.3 Resin Kettle Room, one in 1-E warehouse and two in the Portable Tank Cleaning Area. These operate automatically by means of fusible links in event of a fire. In addition, solvent lines at draw off stations are equipped with self-closing ball valves held open by fusible links.

- 8. Fire Extinguishers
  - a. Water Six (6) 2-1/2 gallon units are located in the halls of the Main Office building one on the first floor and one on the second floor. Note: except for these extinguishers, fires in ordinary combustibles are to be fought with the following listed extinguishers.
  - b. CO2 There are 100 CO2 units on the Plant in the following sizes:
    - 1. 3 2-1/2#

4. 21 - 15#

2. 30 - 5#

5. 34 - 20#

3. 8 - 10#

These are primarily for electrical and solvent fires.

- c. Dry Powder There 97 hand type 20# and 10# extinguishers located throughout the Plant.
  - d. There are eight (8) wheeled type 150# units and two (2) 350# units in, strategic areas.
  - e. Met-L-X There are 6 30# Met-L-X dry powder extinguishers which are to be used for magnesium, aluminum and other metal fires. They are located in areas where metal pastes are stored and in the welding shop for aluminum and magnesium portable tank repair coverage.
  - f. Inspection of extinguishers All fire extinguishers must be inspected monthly by the area. A record of inspections is attached to each extinguisher. The mechanical Department will inspect quarterly.

It will be the responsibility of the area supervisor to check all fire extinguishers in his or her area to see that they remain in their proper locations.

(1) CO2 extinguishers are check weighted quarterly and must be recharged whenever more than 10% off. They are checked monthly for broken seals and general operating conditions.

- (2) When an extinguisher has been damaged, discharged or if pressure is found to be low, the supervisor of the area will immediately notify the Mechanical Department. The Mechanical Department will replace the extinguisher and be responsible for repairs and recharging.
- (3) Extinguishers may not be replaced, unless authorized by the Disaster Chief or his Assistant.

## C. Fire Inspections

- 1. Daily inspections should be made by the operating areas to insure proper operation of fire doors, all fire equipment is readily accessible, all fire extinguishers are in place and fire doors are nor blocked.
- 2. A quarterly inspection is made by the Mechanical Department of all fire fighting and protective equipment including fire mains, hoses, extinguishers, sprinkler systems and fire doors. A copy of the inspection report is routed to each area.
- 3. The Mechanical Department daily checks the fire alarm system to insure it is operable. Weekly at 10:00 a.m. on Monday, test alarms are sounded. Test alarms are always preceded by one (1) ring to denote it is a test. The fire pumps are operated 30 minutes each Wednesday to insure they are in operable condition.
- 4. A.D.T. with a Plant Mechanic, checks the A.D.T. detection system every two months. This is always on the second Tuesday. They open a drain valve to each sprinkler system and check their control panel to insure they receive a flow signal.

#### D. Other Site Programs

Refer to these existing response plans attached to the Contingency Plan and Emergency Procedures.

- Safety Procedure No.19-A; Emergency Control Plan for Fires, explosions, and release of fumes or vapors.
- Safety Procedure No.22; Handling of Chemicals and Hazardous Materials.
- Safety Procedure No.42; Spill Prevention Control and Countermeasure Plan.

#### E. Local Emergency Authorities

- 1. The type of HW handled at this facility is essentially all ignitable and/or EP toxic for heavy metals. The local authorities, therefore, have a primary concern for fire safety -- as they do for all ignitable materials on site. The Toledo Fire Department (and Rescue Squad) make annual visits to the site to re-familiarize themselves with our facilities, hazards, access routes, etc.
- 2. Since the police would only have a minor role in traffic control during a fire, they do not regularly visit the plant for familiarization. A letter advising them of our HW storage and the type of emergency they might be called upon to respond to was sent.
- 3. Local hospitals have known capabilities for treating burns,

# OHD 005 041 846 / 03-48-0195 Revised 11-19-87; 06-28-91

smoke inhalation and other injuries from fires. We do not feel there is any other expected type of injury from emergency incidents in our HW storage facility. A letter advising them of our HW storage and the type of injuries that might occur from an emergency incidents at our facility was sent to several of the hospitals.

		b co percent of the moder cars.	
•	The	emergency authorities for our plant are:	
	a.	Toledo Fire Department and/or Rescue Squad:	911
	b.	Toledo Police Department:	911
	c.	Ambulance -	
		*Hope	478-5953
		*Bunting	475-4606
	d.	Hospitals -	
		*Flower	885-1444
		*Mercy	259-1500
		*MCO	381-3866
		*Parkwood	242-8471
		*Riverside	729-5151
		*St.Charles	698-2511
		*St.Luke's	893-5911
		*St.Vincent's	321-4354
		*Toledo	471-4101

5. The Plant Physician is Dr. J. R. Stevens - Home: If the Plant Physician is not available, call the Academy of Medicine:

473-3200

6. We have a contract with O.H. Materials for emergency response to spills requiring outside assistance or vacuum tanker service: 726-1521

DATE: 11/15/89 S.D.: 4/11/89

UBJECT: EMERGENCY CONTROL PHILOSOPHY AND DISASTER CONTROL

ORGANIZATION.

THIS PROCEDURE OUTLINES THE PLANT ORGANIZATION WHICH IS NEEDED TO DEAL WITH EMERGENCIES ON AND OFF THE PLANT, AND DESCRIBES THE INDIVIDUAL RESPONSIBILITIES OF EACH MEMBER OF THE DISASTER CONTROL ORGANIZATION. THE GOAL OF THIS EMERGENCY CONTROL PLAN IS TO:

A: PREVENT INJURIES

B: MINIMIZE OFF-SITE IMPACT

C: MINIMIZE PROPERTY DAMAGE

D: MINIMIZE OPERATION OUTAGE OR DOWNTIME

DETAILS OF VARIOUS EMERGENCY PROCEDURES ARE ALSO INCLUDED:

#### I. OUTLINE::

- A. ORGANIZATION
- B. GENERAL FUNCTIONAL RESPONSIBILITIES
- C. FIRE ALARM SYSTEM
- D. RALLY POINTS AND HEAD COUNT PROCEDURE
- E. CALL-IN PROCEDURE FOR OFF SHIFTS
- F. ROLE AND RESPONSE OF THE FIRE BRIGADE
- G. DEALING WITH THE NEWS MEDIA

#### II. DETAIL:

A. ORGANIZATION.
CHART 19-1 SHOWS THE DISASTER CONTROL ORGANIZATION FOR DAYS.

#### B. GENERAL FUNCTION RESPONSIBILITIES.

#### 1) PLANT MANAGER.

THE MANAGER HAS OVERALL RESPONSIBILITY TO PROTECT PERSONNEL, SITE FACILITIES, AND THE PUBLIC, BEFORE, DURING AND AFTER AN EMERGENCY OR DISASTER. HE SHOULD BE AVAILABLE FOR COUNCIL AND OVERALL GUIDANCE.

#### 2) PROTECTION COORDINATOR.

DAYS

OFF SHIFTS

PROTECTION COORDINATOR

AREA COORD. / BRIGADE CHIEFS

RESIN

ASS'T. PROTECTION COORDINATOR

MANUFACTURING COORDINATOR

THE PROTECTION COORDINATOR ORGANIZES AND DIRECTS ALL EMERGENCY CONTROL ACTIVITIES PRIOR TO, DURING AND AFTER AN EMERGENCY HAVING DISASTER POTENTIAL. NORMALLY THE

12	HOUR	RESPONSE	TRAN

DISASTER CONTROL ORGANIZATION	FIRE BRIGADE ROSTER 8 & 12 HOUR	BHANELS / RESIN / RECEIVING				
8:00 - 4:00	8:00 - 4:00	"A" SHIFT				
Protection Coordinator - G. CROSS Asst. Protection Coord B. MEUIN Brigade Chief - RESIN FLS Disaster Coordinator - G. SHUK Communications and		M T W TH F S S 12M-12N H T W TH F S S 12N-12N B. SZYMANSKI J. BYERS R. JOHNSTON				
Public Affairs Coord B. MELIN / S. BRIGHT Transportation Coord H. DUNN / R. SHEBHY						
Special Hazards Coord D. AZEMA / L. HARRIS Head Count Coordinator - QUAL.CONT.OPER.12HRS.	4:00 - 12:00					
-		*B* SHIFT				
-		N T W TH F S S 12N-12N H T W TH F S S 12N-12N				
4:00 - 12:00 / 12:00 - 8:00		K. CARPENTER C. ESTEL B. JESSEN				
3rigade Chief - RESIN FLS		B. PATTON				
L _ter Coordinator - CALLED-IN AS NEEDED Communications and	12:00 - 8:00	D. GARTEE				
Public Affairs Coord CALLED-IN AS NEEDED  Transportation Coord CALLED-IN AS NEEDED						
Special Hazards Coord CALLED-IN AS MEEDED		"C" SHIFT				
Head Count Coordinator - QUAL.CONT.OPER.12HRS		NTWTHFSS 12K-12K NTWTHFSS 12K-12K				
_		T. NCLAUGHLIN G. VANDERVLUCHT J. WHETSEL				
OFF SHIFT CALL-IN LIST	DISTRIBUTION LIST	S. BLACK T. FEDLER				
(Guard to Initiate Call-In)						
Protection Coordinator - G. CROSS	B. MBLIN G. CROSS					
Asst. Protection Coord B. MBLIN	S. BRIGHT	"D" SHIFT				
Disaster Coordinator - G. SHUK	C. GOULDING (2)					
Communications And	H. DUNN	N T W TH F S S 12N-12N				
Public Affairs Coord E. NELIN / S. BRIGHT	D. AZBNA	NTWTHFSS 12N-12K				
Transportation Coord H. DUNN / R. SHEBHY Special Hazards Coord D. AZEMA / L. HARRIS	L. HARRIS R. SHBEHY	K. BOSCH K. Vogelsong				
opecial Bazards Coold. D. Rabha / B. Rakkis	QUAL.CONT.OPER. GRINDING FLOOR GUARD	J. WEAVER				
	RESIN F.L.S. (3)					

DATE:

# SAFETY PROCEDURE NO. 19

COORDINATOR WOULD BE STATIONED AT THE MAIN CONTROL GATE WHERE HE CAN COORDINATE ACTIVITIES BETWEEN GROUPS, FURNISH INFORMATION TO THE MANAGER AND MAINTAIN CONTROL. SINCE HE HAS AN OVERALL PICTURE ON THE SITUATION, HE IS IN A POSITION TO DECIDE WHAT STEPS SHOULD BE TAKEN, SUCH AS EVACUATING OR SHUTTING DOWN OPERATING FACILITIES, INITIATING MISSING PERSONS SEARCH, OR SOUNDING THE "ALL CLEAR". ALL OF THE SERVICE COORDINATORS AND CHIEFS REPORT TO THE PROTECTION COORDINATOR AND HAVE RESPONSIBILITY FOR KEEPING HIM INFORMED.

#### 3) DISASTER COORDINATOR

DAYS

OFF SHIFTS

DISASTER COORDINATOR

AREA COORD.
MAINTENANCE

CALLED-IN AS

NEEDED

THE DISASTER COORDINATOR REPORTS TO THE PROTECTION COORDINATOR, AND IT IS THE DISASTER COORDINATOR'S RESPONSIBILITY TO MAINTAIN THE CONTINUITY OF WATER FLOW AND FIRE PUMP OPERATION FOR PROVIDING EMERGENCY LIGHTING AT THE SCENE; FOR MAINTAINING ELECTRIC POWER FOR VITAL SERVICES; FOR RESTORING BUILDING, EQUIPMENT, POWER AND OFFICETIES IF DAMAGED OR DISRUPTED. THE DISASTER CHIEF IS CHAIRMAN OF THE "FIRE PREVENTION AND DISASTER CONTROL COMMITTEE", WHICH IS A SUB-COMMITTEE OF THE CENTRAL SAFETY COMMITTEE. THE "FIRE PREVENTION AND DISASTER CONTROL COMMITTEE" IS RESPONSIBLE FOR KEEPING ALL EMERGENCY PROCEDURES UP TO DATE, FOR MAINTAINING THE FIRE FIGHTING EQUIPMENT, FOR THE TRAINING OF THE FIRE BRIGADE, AND FOR MAINTAINING A GOOD WORKING RELATIONSHIP WITH THE TOLEDO FIRE DEPARTMENT.

#### 4) SPECIAL HAZARDS COORDINATOR.

DAYS

OFF SHIFTS

SPECIAL HAZARDS COORD.

SUPV. QUAL. CONTROL CALLED-IN AS

NEEDED

BACK-UP

PROD./QUAL.
ASSURANCE SUPV.

THE SPECIAL HAZARDS COORDINATOR HAS THE RESPONSIBILITY TO ADVISE THE BRIGADE CHIEF ON THE POSSIBLE CHEMICAL OR VAPOR HAZARDS WHICH MAY BE PRESENT, THE TYPE OF PROTECTIVE EQUIPMENT WHICH IS REQUIRED, AND THE PROPER DECONTAMINATION PROCEDURES.

# SAFETY PROCEDURE NO. 19

#### 5) BRIGADE CHIEF

DAYS

OFF SHIFTS

BRIGADE CHIEF

RESIN - 1ST LINE SUPV.

THE BRIGADE CHIEF IS RESPONSIBLE FOR DIRECTING THE ACTIVITIES OF THE FIRE BRIGADE. THE BRIGADE CHIEF REPORTS TO THE PROTECTION COORDINATOR.

ALL BRIGADE CHIEFS ARE REQUIRED TO HAVE HAD SPECIAL FIRE FIGHTING TRAINING, SUCH AS THE ANSUL SCHOOL. ALL BRIGADE CHIEFS ARE MEMBERS OF THE FIRE PREVENTION AND DISASTER CONTROL COMMITTEE AND ARE THUS VERY MUCH INVOLVED IN THE TRAINING OF BRIGADE MEMBERS.

#### 6) HEAD COUNT COORDINATOR

DAYS

OFF SHIFTS

QUALITY CONTROL OPERATORS (12 HR.)

THE HEAD COUNT COORDINATOR IS RESPONSIBLE FOR THE "HEAD COUNT" PROCEDURE AND REPORTS TO THE PROTECTION COORDINATOR THE NAMES OF THE PERSONS WHO ARE ACCOUNTED FOR. IT IS IMPORTANT THAT THE "HEAD COUNT" BE COMPLETED QUICKLY BECAUSE A FEW MINUTES COULD BE CRITICAL FOR A MISSING OR INJURED PERSON. THE ACTUAL "HEAD COUNT" IS CONDUCTED BY AREA SUPERVISION AND THE RESULTS ARE COMMUNICATED TO THE HEAD COUNT COORDINATOR BY MEANS OF TWO-WAY RADIO OR RUNNER. IN ADDITION TO ACCOUNTING FOR EMPLOYEES, ALL VISITORS AND CONTRACTORS MUST BE ACCOUNTED FOR.

#### 7) TRANSPORTATION COORDINATOR.

IRANOTOKINITON COOKDIN	DAYS	OFF SHIFTS
TRANSPORTATION COORD.	RECEIVING SUPERVISOR	GUARD (COORDINATOR CALLED-IN AS NEEDED)
BACK-UP	MISC. SERVICE SUPERVISOR	GUARD (BACK-UP CALLED-IN AS NEEDED)

THE TRANSPORTATION COORDINATOR SECURES THE GATES; DIRECTS THE EMERGENCY VEHICLES TO THE SCENE; KEEPS PLANTS STREETS CLEAR SO THAT THERE IS AN UNOBSTRUCTED ROUTE TO THE SCENE; LIMITS ENTRY TO AUTHORIZED PERSONS; REGISTERS ALL PEOPLE WHO ENTER OR LEAVE THE SITE; RECEIVES VISITORS, PARTICULARLY REPRESENTATIVES OF THE NEW MEDIA, AND HAS THEM ESCORTED TO THE PROPER LOCATION; AND CONTACTS LOCAL POLICE SO THAT ROADBLOCKS AND TRAFFIC CONTROL MEASURES CAN BE TAKEN TO MAINTAIN ACCESS TO SITE ENTRANCES. ON THE OFF

SHIFTS, THE GUARD WILL INITIATE THE CALL-IN PROCEDURES TO SUMMON DISASTER CONTROL COORDINATORS AND URGENTLY NEEDED OUTSIDE AGENCIES, SUCH AS MEDICAL SERVICES, FIRE DEPARTMENT AND POLICE.

EMPLOYEES, OUTSIDERS AND CURIOSITY SEEKERS MAY PRESENT A CHALLENGE SINCE EMERGENCIES FREQUENTLY DRAW CROWDS. WITHOUT CONTROL, THE CROWD MIGHT CONGREGATE CLOSE TO THE SCENE AND THUS, UNNECESSARILY EXPOSE THEMSELVES TO INJURY. OUTSIDERS MIGHT BLOCK ACCESS TO THE SITE ENTRANCE IF SUITABLE CONTROL MEASURES ARE NOT TAKEN. THE TRANSPORTATION COORDINATOR, IN COOPERATION WITH LOCAL POLICE, SHOULD DEVELOP PROCEDURES SO THAT IN A POLITE MANNER THE CROWDS ARE CONTROLLED.

# 8) COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR

	DAYS	OFF SHIFTS
COMMUNICATIONS AND PUBLIC AFFAIRS COORD.	MANUFACTURING/ PLANNING/ SUPERVISOR	CALLED-IN AS NEEDED
BACK-UP	PLANT MANAGER	CALLED-IN AS NEEDED

THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR HAS THE RESPONSIBILITY OF MAINTAINING PLANT COMMUNICATIONS AND OF RELEASING INFORMATION TO THE PUBLIC AND NEWS MEDIA. HE IS RESPONSIBLE FOR COORDINATING CONTACTS WITH FAMILIES OF INJURED OR DECEASED EMPLOYEES AND MAKE SURE THIS IS DONE BEFORE THE VICTIMS' NAMES ARE RELEASED TO THE NEWS MEDIA. TO ACCOMPLISH THIS, HE MUST MAINTAIN ACCURATE RECORDS OF THE NAMES AND ADDRESSED OF EMPLOYEES. THE ACTUAL VISIT TO THE FAMILY SHOULD BE DONE BY THE EMPLOYEE'S OWN SUPERVISOR.

THE COMMUNICATION AND PUBLIC AFFAIRS COORDINATOR IS RESPONSIBLE FOR PROVIDING FOOD, CLOTHING AND SHELTER FOR EMPLOYEES WHO STAY AT THE SITE FOR AN EXTENDED PERIOD OF TIME.

IT IS ALSO HIS RESPONSIBILITY TO ENSURE THAT TELEPHONE SERVICES ARE AVAILABLE FOR OFFICIAL CALLS DURING EMERGENCIES. DURING POWER FAILURES, THE FOLLOWING PHONES ARE THE EMERGENCY STATIONS FOR INCOMING AND OUTGOING CALLS:

GATEHOUSE	478-1211	EXT.	290
RESIN SUPERVISORS OFFICE	478-1212	EXT.	230
POWERHOUSE	478-1213	EXT.	250
DEMMING ROOM	478-1214	EXT.	202
AREA COORD. OFFICE -ENAMELS	478-1215	EXT.	200

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THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR RELEASES ALL INFORMATION TO THE PUBLIC AND NEWS MEDIA. HE SHOULD BE KEPT INFORMED OF HAPPENINGS BY COMMUNICATING WITH THE PROTECTION COORDINATOR AND THE PLANT MANAGER. IT IS HIS RESPONSIBILITY TO ESTABLISH A PRESS ROOM IN EITHER THE MAIN OFFICE CONFERENCE ROOM OR IN THE CREDIT UNION BUILDING. FOR SPECIFIC INFORMATION ON HOW TO DEAL WITH THE PRESS, SEE SECTION "G" OF THIS PROCEDURE.

#### 9) MEDICAL COORDINATOR

	DAYS	OFF SHIFT
MEDICAL COORDINATOR	PLANT DOCTOR	CALLED-IN AS NEEDED
BACK-UP	PLANT NURSE	CALLED-IN AS NEEDED

THE MEDICAL COORDINATOR IS RESPONSIBLE FOR THE CARE AND HANDLING OF INJURED PERSONS, ESTABLISHING CENTRAL AND FIELD MEDICAL STATIONS, AND MAINTAINING LIAISON WITH OUTSIDE MEDICAL SERVICES SUCH AS PHYSICIANS, AMBULANCE SERVICES AND HOSPITALS.

DURING AN EMERGENCY THE MEDICAL COORDINATOR WILL BE STATIONED AT THE PLANT MEDICAL FACILITY IN THE MAIN OFFICE. IF THE MAIN OFFICE IS NOT SAFE, A FIELD MEDICAL STATION WILL BE ESTABLISHED IN A SAFE LOCATION.

THE MEDICAL COORDINATOR KEEPS THE MAIN CONTROL CENTER ADVISED ABOUT SERIOUSLY INJURED PERSONS OR FATALITIES AND REPORTS ALL CHANGES IN STATUS. HE WILL NOTIFY THE CORONER OF FATALITIES.

DURING AND AFTER THE EMERGENCY HE INSPECTS AND CONTROLS SANITARY PROBLEMS, INCLUDING POTABILITY OF FOOD AND WATER AND DISPOSAL OF SANITARY WASTE.

#### C. FIRE ALARM SYSTEM.

- 1) SIXTEEN "A.D.T." FIRE ALARM BOXES ARE SPREAD ACROSS THE PLANT. WHEN A FIRE, SERIOUS SPILL, OR OTHER TYPE DISASTER OCCURS, THE EMPLOYEE ON THE SCENE SHOULD SOUND THE NEAREST FIRE ALARM BOX. IN THE EVENT OF A VAPOR RELEASE, DISCRETION SHOULD BE USED SO AS NOT TO RALLY THE BRIGADE AT THE SOURCE OF VAPOR. THE EMPLOYEE PULLING THE ALARM SHOULD REMAIN AT THE BOX TO DIRECT THE BRIGADE. UPON HEARING THE ALARM, THE GUARD WILL IMMEDIATELY CALL THE TOLEDO FIRE DEPARTMENT.
- 2) A.D.T. WILL IMMEDIATELY CALL THE TOLEDO FIRE DEPARTMENT IF THEY RECEIVE A SPRINKLER FLOW ALARM AND IF THE FIRE PUMP STARTS. IF A.D.T. ADVISES THE PLANT THAT THEY HAVE RECEIVED A SPRINKLER FLOW ALARM, THE FIRE ALARM IN THE AREA SHOULD BE PULLED SO THAT THE AREA WILL BE EVACUATED AND A SEARCH FOR THE

TROUBLE MADE BY THE FIRE BRIGADE.

# 3) LOCATION OF THE FIRE ALARM BOXES.

- 1-1-1 1ST FLOOR, BLDG. 2, MAIN OFFICE
- 1-1-2 S.E. CORNER, BLDG. 1-B, 3RD FLOOR ENAMELS
- 1-1-3 N.W. CORNER, BLDG. 1-A, 2ND FLOOR ENAMELS
- 1-1-4 S.W. WALL, BLDG. 3, MECHANICAL SHOP
- 1-1-5 WEST DOCK, BLDG. 1-H, CHEMICAL
- 1-2-1 WEST DOCK, BLDG 1-A, RECEIVING
- 1-2-2 N.E. CORNER, BLDG 43, CREDIT UNION
- 1-2-3 NORTH WALL, BLDG 1-F, RESIN TANK ROOM
- 1-2-4 SOUTH WALL, BLDG. 7, BOILER ROOM
- 1-2-5 POST, SOUTH OF N. TANK FARM GRAVITY UNLOADING
- 1-3-1 S.E. CORNER, BLDG 53, SERVICE GARAGE
- 1-3-2 W. CENTER DOOR, BLDG. 3, 2ND FLOOR LAB
- 1-3-3 OUTSIDE BLDG. 1-E, OPPOSITE STOREROOM
- 1-3-4 SOUTH WALL, BLDG. 55, WAREHOUSE
- 1-3-5 2ND FLOOR, BLDG 1-J, RESIN STAIRWELL
- 1-4-1 NORTH WALL, BLDG. 56, REACTOR NO.7

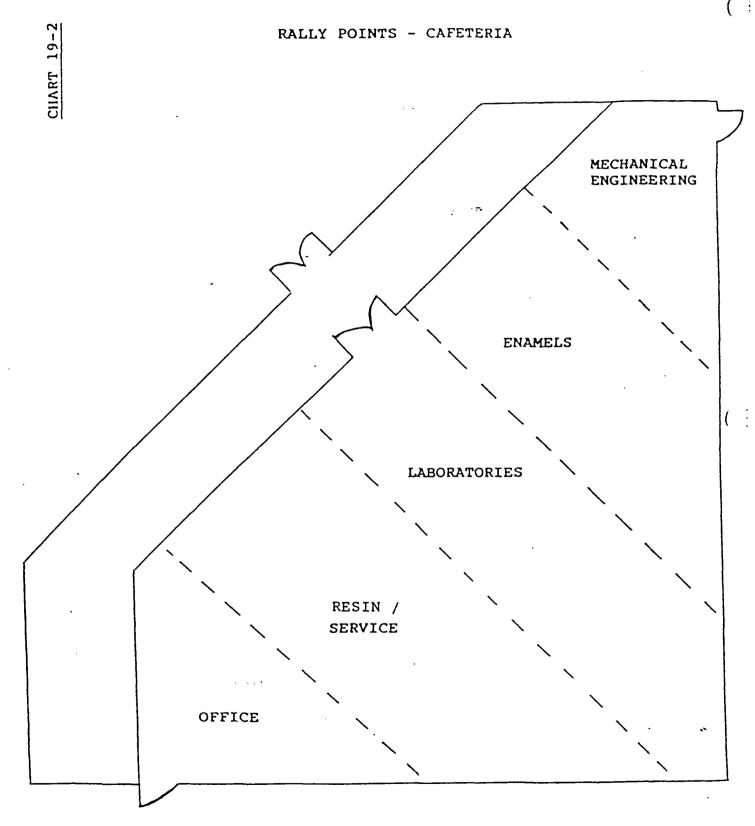
THE ABOVE FIRE ALARM SIGNALS WILL SOUND CONTINUOUSLY UNTIL THE GUARD IS DIRECTED TO SILENCE THE HORNS. OTHER PLANT ALARMS WILL SOUND AS FOLLOWS:

- 2-2-2 EVACUATE TO 1-A BASEMENT (REPEATEDLY)
- 9-9-9 PLANT EVACUATION (REPEATEDLY)
- 4) THE A.D.T. FIRE ALARM SYSTEM HAS A BATTERY BACK-UP SO THAT IT WILL BE OPERATIONAL IF A POWER FAILURE OCCURS.
- D. RALLY POINTS AND HEAD COUNT PROCEDURES.
  - 1) RALLY POINTS FOR FIRE ALARMS.

UPON HEARING A FIRE ALARM, ALL PERSONAL WHO DO NOT HAVE EMERGENCY DUTIES SHOULD PROCEED, IN AN ORDERLY FASHION, TO THE CAFETERIA(\*) FOR HEAD COUNT EXCEPT FOR:

- A) CONTRACTORS REPORT TO BACK GATE.
- B) SELECTED RESIN AREA OPERATORS WILL REPORT TO "K" BLDG. CONTROL ROOM AND REPORT HEAD COUNT BY TWO-WAY RADIO TO THE HEAD COUNT COORDINATOR. THE BRIGADE CHIEF WILL DECIDE WHETHER OR NOT TO EVACUATE THE RESIN AREA ONCE THE EQUIPMENT HAS BEEN SHUT DOWN AND BROUGHT TO A SAFE CONDITION. THEY THEN REPORT TO THE GUARD HOUSE, UNTIL THE "ALL CLEAR" HAS BEEN GIVEN.
- (\*) IF ALARM 1-1-4 IS PULLED AND THE CAFETERIA BUILDING IS INVOLVED IN THE FIRE, THE RALLY POINT WILL BE THE S.E. AREA OF THE MAIN PARKING LOT.

NOTE: ALL VISITORS SHOULD BE ESCORTED BY THEIR DUPONT



PAGE 6A

HOST TO THEIR RALLY POINT.

THE AREA RALLY POINTS INSIDE THE CAFETERIA ARE SHOWN ON CHART 19-2.

#### 2) RALLY POINT FOR PLANT EVACUATION.

PLANT EVACUATION IS DENOTED BY 9-9-9 BLASTS REPEATEDLY ON THE FIRE SYSTEM. THE RALLY POINT FOR ALL PERSONNEL IS THE FRONT LAWN NEAR THE FENCE ALONG TREMAINSVILLE ROAD.

#### 3) RALLY POINT FOR WEATHER EMERGENCIES.

2-2-2 BLASTS REPEATEDLY ON THE FIRE ALARM SYSTEM DENOTES A WEATHER EMERGENCY. ALL PERSONNEL SHOULD RALLY IN THE 1-A BASEMENT. SIGNS ARE HANGING FROM THE CEILING DESCRIBING WHERE EACH AREA SHOULD RALLY.

### 4) HEAD COUNT PROCEDURE.

EACH AREA MUST HAVE A PERSON DESIGNATED TO MAKE THE HEAD COUNT. THE RESULTS OF THE HEAD COUNT ARE TO BE COMMUNICATED TO THE HEAD COUNT COORDINATOR BY RUNNER (WITH A WRITTEN REPORT) OR BY MEANS OF THE TWO-WAY RADIO. IT IS IMPORTANT THAT HEAD COUNTS BE COMPLETED QUICKLY SO THAT IF ANYONE IS MISSING, A SEARCH CAN BEGIN PROMPTLY. EACH AREA SHOULD HAVE AN UP-TO-DATE PERSONNEL ROSTER SO THAT THEY KNOW WHO IS ON PLANT AND WHO IS OFF PLANT, SO THAT UNNECESSARY PERSON SEARCHES ARE NOT UNDERTAKEN.

#### E) CALL-IN PROCEDURE FOR OFF SHIFTS.

WHEN A FIRE ALARM SOUNDS DURING THE OFF SHIFTS, THE GUARD WILL IMMEDIATELY CALL THE FIRE DEPARTMENT AND THEN BEGIN TO CALL-IN THE APPROPRIATE DISASTER CONTROL PERSONNEL WHEN DIRECTED BY THE BRIGADE CHIEF USING THE EMERGENCY CALL-IN PROCEDURE. THE PHONE IN THE GUARD HEADQUARTERS IS PROGRAMED SO THAT DISASTER CONTROL PERSONNEL CAN BE CALLED BY ONLY DIALING TWO NUMBERS. THE EMERGENCY CALL-IN LIST IS SHOWN BELOW:

FIRE DEPT. / RESCUE SQUAD	20	244-3473	
PROTECTION COORDINATOR	21	865-7341	(G. CROSS)
ASST. PROTECTION COORDINATOR	22	536-0607	(E. MELIN)
DISASTER COORDINATOR	23	841-1577	(G. SHUK)
COMMUNICATIONS / PUBLIC AFFAIRS COORD.	25	536-0607	(E. MELIN)
ASST. COMM. / PUBLIC AFFAIRS COORD.	26	882-5241	(S. BRIGHT)
TRANSPORTATION COORDINATOR	27	241-1422	(H. DUNN)
ASST. TRANSPORTATION COORDINATOR	28	691-4962	(R. SHEEHY)
SPECIAL HAZARDS COORDINATOR	29	471-0203	(D. AZEMA)
ASST. SPECIAL HAZARDS COORDINATOR	30	885-5877	(L. HARRIS)
PLANT NURSE	31		(B. BROGLE)
PLANT PHYSICIAN	32	882-0660	(DR. STEVENS)
SAFETY SUPERVISOR	33	723-7444	(D. STARKEY)

#### F. ROLE AND RESPONSE OF THE FIRE BRIGADE.

#### 1) ROLE OF THE FIRE BRIGADE.

THE TOLEDO PLANT FIRE BRIGADE IS COMPOSED OF VOLUNTEERS FROM ALL AREAS OF THE PLANT. THE BRIGADE RESPONDS TO THE FIRE ALARM AND WILL ATTEMPT TO EXTINGUISH THE FIRE OR TO CONTAIN THE FIRE UNTIL THE TOLEDO FIRE DEPARTMENT ARRIVES (APPROXIMATELY 5 MINUTES). ONCE THE FIRE DEPARTMENT ARRIVES, THE BRIGADE WILL TURN OVER THE FIRE FIGHTING DUTIES TO THEM.

IT IS THE OBJECTIVE OF THE BRIGADE TO LIMIT FIRE FIGHTING ACTIVITIES TO INCIPIENT-STAGE FIRES; HOWEVER, BECAUSE OF THE SPECIAL HAZARDS OF A PAINT MANUFACTURING PLANT, PROTECTIVE CLOTHING IS AVAILABLE FOR USE BY THE BRIGADE, AND ALL BRIGADE MEMBERS ARE TRAINED ON THE USE OF SELF-CONTAINED BREATHING APPARATUS. INTERIOR STRUCTURAL FIRE FIGHTING WILL BE DONE BY THE TOLEDO FIRE DEPARTMENT.

# 2) TRAINING OF THE BRIGADE.

THE FIRE BRIGADE RECEIVES MONTHLY TRAINING. THE TRAINING SESSIONS ARE ORGANIZED BY THE FIRE PREVENTION AND DISASTER CONTROL COMMITTEE, WHICH IS A SUB-COMMITTEE OF THE CENTRAL SAFETY COMMITTEE. EACH YEAR, THE FOLLOWING HANDS-ON TRAINING IS REQUIRED: FIRE EXTINGUISHER; FIRE HOSE; WATER CANNON; FOAM TRUCK AND S.C.B.A (TWICE A YEAR). A MINIMUM OF TWO FIRE OR DISASTER DRILLS WILL BE HELD EACH YEAR.

THE BRIGADE CHIEFS ARE REQUIRED TO RECEIVE ADDITIONAL OFF-PLANT FIRE FIGHTING TRAINING SUCH AS THAT PROVIDED BY THE ANSUL FIRE SCHOOL.

# 3) FIRE BRIGADE RESPONSE PROCEDURE.

WHEN A FIRE ALARM SOUNDS, THE BRIGADE CHIEF ALONG WITH THE FIRE BRIGADE, REPORTS TO THE FIRE ALARM BOX, AND THE EMERGENCY VEHICLE REPORTS TO THE NEAREST HOSE HOUSE. THE BRIGADE CHIEF ANALYZES THE SITUATION AND DECIDES THE TYPE OF ACTION TO TAKE. HE CAN GET THAT INPUT FROM THE SPECIAL HAZARDS COORDINATOR ON THE HAZARDS IN THE AREA AND THE PROTECTIVE EQUIPMENT NEEDED; AND THE AREA COORDINATOR ON PROCESS PROBLEMS AND PROPER SHUTDOWN PROCEDURE. THE DISASTER CHIEF IS AVAILABLE FOR OVER-ALL GUIDANCE. NORMALLY, THE BRIGADE CHIEF WILL UTILIZE THE FIRE BRIGADE FOR THE FIRE FIGHTING USING EITHER FIRE EXTINGUISHERS OR AREA HOSE REELS. IT IS THE BRIGADE CHIEF'S RESPONSIBILITY TO DECIDE HOW TO UTILIZE AND DEPLOY HIS BRIGADE TO BEST FIGHT THE FIRE.

THE BRIGADE CHIEF WILL WITHDRAW HIS BRIGADE AND TURN OVER THE FIRE FIGHTING TO THE TOLEDO FIRE DEPARTMENT WHEN IT ARRIVES. THE BRIGADE CHIEF AND THE BRIGADE WILL REMAIN AT THE SCENE TO ADVISE THE FIRE DEPARTMENT.

#### 4) EMERGENCY CONTROL ROSTER.

EACH WEEK AN EMERGENCY CONTROL ROSTER IS PUBLISHED. A TYPICAL ROSTER IS SHOWN ON CHART 19-1.

#### G. DEALING WITH THE NEWS MEDIA.

#### 1) THE PLANT SPOKESMAN.

THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR WILL HANDLE ALL CONTACTS WITH THE MEDIA INCLUDING INFORMATION, BULLETINS, PHOTOGRAPHS, ETC. HE MAY PROVIDE BACKGROUND INFORMATION OR A GENERAL STATEMENT ABOUT A SITUATION, BUT, NEWS RELEASES WILL BE ISSUED BY AND/OR IN THE NAME OF THE PLANT MANAGER.

#### 2) PLANT NEWS MEDIA CENTER.

NEWS MEDIA CONTACTS MAY BE MADE BY TELEPHONE AND SHOULD BE REFERRED TO THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR. IF NEWSMEN APPEAR ON THE PLANT, THEY SHOULD NOT BE TREATED AS INTRUDERS, BUT WELCOMED AS A MEANS OF GETTING THE FACTS TO THE PUBLIC AS PROMPTLY AND ACCURATELY AS POSSIBLE.

THE MAIN CONFERENCE ROOM IS DESIGNATED AS THE PUBLIC INFORMATION CENTER WITH THE CREDIT UNION AS THE ALTERNATE. THE NEWSMEN SHOULD BE MET AT THE FRONT GATE BY THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR OR ALTERNATE OR A DESIGNATED AID AND ESCORTED TO THE PUBLIC INFORMATION A PRIMARY AID MAY BE DESIGNATED TO ASSIST THE COMMUNICATION AND PUBLIC AFFAIRS COORDINATOR AND SHOULD BE ABLE TO REMAIN WITH THE MEDIA AT ALL TIMES IN A MAJOR EMERGENCY; THE AID WILL FULFILL THAT FUNCTION AND RESPOND TO THE ROUTINE NEEDS OF THE NEWSMEN ON THE SCENE. MINIMIZE CONFUSION IN THE INTERVAL BETWEEN THE OCCURRENCE OF AN EMERGENCY AND THE ARRIVAL OF THE COORDINATOR AND/OR ALTERNATE, THE TRANSPORTATION COORDINATOR / GUARD SHOULD ESCORT NEWSMEN TO THE CREDIT UNION AND ASSIGN A MEMBER OF SUPERVISION TO REMAIN WITH THEM UNTIL THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR ARRIVES AT THE PLANT. NEWSMEN WOULD NOT NORMALLY BE EXPECTED TO ARRIVE ON THE PLANT EARLIER THAN ONE-QUARTER HOUR AFTER AN ACCIDENT.

THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR OR DESIGNATE CAN HELP MAKE THE NEWSMEN'S JOB EASIER BY PROVIDING HIM THE BACKGROUND ABOUT THE FACILITY, PLANT HISTORY AND BACKGROUND INFORMATION ABOUT PRODUCTS PRODUCED AND THEIR APPLICATIONS. TELEPHONE FACILITIES SHOULD ALSO

BE POINTED OUT TO ASSIST THE NEWSMEN. NEWSMEN PREFER TO TALK WITH THE APPOINTED PLANT CONTACT, AND USUALLY WILL WORK THROUGH ESTABLISHED CHANNELS UNLESS THEIR INQUIRES ARE DISREGARDED OR THE RESPONSES ARE EVASIVE OR DELAYED. DEADLINES ARE A WAY OF LIFE FOR THE MEDIA AND PROMPT HANDLING OF AN INQUIRY OFTEN CAN MEAN THE DIFFERENCE BETWEEN AN INACCURATE, UNFAVORABLE STORY OR BROADCAST AND ONE THAT IS ACCURATE AND STRAIGHT FORWARD.

#### 3) MEDIA INFORMATION.

THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR SHOULD PREPARE A BULLETIN AS SOON AS POSSIBLE TO BE GIVEN TO THE REPORTERS ON THE PLANT. THE BULLETIN MAY BE STATED AS GIVEN TO THE NEWSMEN BY THE PLANT MANAGER OR THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR IN THE NAME OF THE PLANT MANAGER ONLY AFTER APPROVAL BY THE PLANT MANAGER OR DESIGNATE. INFORMATION SHOULD INCLUDE THE TIME, LOCATION, THE AREA IN WHICH THE INCIDENT OCCURRED, THE CAUSE, IF KNOWN, AND THE EXTENT OF DAMAGE, IF IT CAN BE ESTIMATED. ABOVE ALL, IT SHOULD INCLUDE THE FULL NAMES, AGES, JOB TITLES, AND HOME ADDRESSES OF ALL INJURED PERSONS, WITH SOME INDICATION OF THE SEVERITY OF THE INJURIES. IF EMPLOYEES ARE HOSPITALIZED, ALSO PROVIDE THE NAME OF THE HOSPITAL.

UNDER ORDINARY CIRCUMSTANCES, NAMES OF THE INJURED SHOULD BE RELEASED PROMPTLY AFTER THE NEXT OF KIN HAVE BEEN NOTIFIED. RELEASE OF NAMES SHOULD NOT BE UNDULY DELAYED IF NEXT OF KIN CANNOT BE CONTACTED PROMPTLY. THERE IS NO HARM IN REPORTING THAT "THE CAUSE HAS NOT BEEN DETERMINED" OR THE "EXTENT IS UNKNOWN AT THIS TIME".

THE PLANT MANAGER SHOULD BE VISIBLE TO THE NEWS MEDIA DURING EMERGENCIES. THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR SHOULD SEEK OPPORTUNITIES TO MAKE THE MANAGER'S PRESENCE AND ROLE VISIBLE. HE SHOULD, FOR EXAMPLE, ARRANGE FOR THE MANAGER TO TALK WITH THE MEDIA IN A PRESS CONFERENCE AS INFORMATION BECOMES AVAILABLE. IF THE NATURE OF THE INCIDENT DICTATES THE COMMUNICATION AND PUBLIC AFFAIRS COORDINATOR ISSUES THE BULLETINS, HE SHOULD ARRANGE FOR THE MANAGER TO TALK WITH THE MEDIA IN A PRESS CONFERENCE AFTER DISASTER CONTROL HAS BEEN ACHIEVED.

#### 4) CORPORATE NOTIFICATION.

THE PUBLIC AFFAIRS DEPARTMENT SHOULD BE INFORMED OF AN ACCIDENT IMMEDIATELY AFTER WILMINGTON DEPARTMENTAL MANAGEMENT HAS BEEN INFORMED. ASSISTANCE FROM THE PUBLIC AFFAIRS DEPARTMENT IS AVAILABLE AT ALL TIMES. ANY MATTERS THAT COULD HAVE SIGNIFICANT IMPLICATIONS FOR OR EFFECT ON THE CORPORATION SHOULD BE FORWARDED THROUGH DEPARTMENTAL MANAGEMENT TO THE VICE-PRESIDENT -EXTERNAL AFFAIRS AND GENERAL COUNSEL PRIOR TO RELEASING TO THE NEWS MEDIA.

### 5) PHOTOGRAPHS AND T.V. CAMERAMEN.

PHOTOGRAPHERS AND T.V. CREWS PRESENT PARTICULAR PROBLEMS BECAUSE THEY DEAL WITH THE VISUAL AND ARE USUALLY MORE AGGRESSIVE IN THEIR DEMANDS TO VISIT THE SCENE OF AN ACCIDENT. THE BEST RULE OF THUMB IN HANDLING THEM IS THIS: DO WHAT YOU CAN, CONSISTENT WITH SAFETY CONSIDERATIONS AND THE NEED TO PROTECT PROPRIETARY INFORMATION, TO ASSIST THEM. IT IS DESIRABLE TO MAKE SURE THAT CONFIDENTIAL INSTALLATIONS ARE NOT PHOTOGRAPHED AND THAT NO ONE IS EXPOSED TO POTENTIAL HAZARDS. CORDONING OFF THE AREA OF THE ACCIDENT MAY BE HELPFUL IN RESTRICTING MOVEMENT. IF THE HAZARD IS TOO GREAT TO PERMIT PICTURES, POINT OUT COURTEOUSLY BUT FIRMLY TELLING THEM THEY MAY VISIT THE AREA ONCE THE DANGER IS OVER. IF CONVENIENT, PICTURES OR A SIMILAR UNAFFECTED AREA MAY OFFER A GOOD SUBSTITUTE.

# OFFICE I - PERSONNEL REPORT

# OFFICE I - PERSONNEL REPORT

<u>F</u> PLANT MANAGER (SAM)	ACCOUNTED FOR	<del></del>	COUNTED FOR
D^NIQUE AZEMA		PLANT MANAGER (SAM)	
LI . HARRIS	<del></del>	DOMINIQUE AZEMA L. D. HARRIS	
E. G. MELIN		E. G. MELIN	
HARVEY SAVAGE		HARVEY SAVAGE	
PERSONNEL SUPERVISOR (JANE)	<del></del>	PERSONNEL SUPERVISOR	
EMPLOYEE RELATIONS SUPER (DAN)	<del></del>	EMPLOYEE RELATIONS SUPER (DAN)	
SAFETY TECHNICIAN (DAVE)	<del></del>	SAFETY TECHNICIAN (DAVE)	<del></del>
ADMINISTRATIVE SECRETARY (MARCIA)		ADMINISTRATIVE SECRETARY (MARCIA)	
PERSONNEL SECRETARY (ELAINE)	<del></del>	PERSONNEL SECRETARY (ELAINE)	<del></del>
PERSONNEL SECRETARY (ALMA)	<del></del>	PERSONNEL SECRETARY (ALMA)	
RECEPTIONIST (JUNE)		RECEPTIONIST (JUNE)	
NURSE (BETTY)		NURSE (BETTY)	
DOCTOR	<del></del>	DOCTOR	
VISITOR(S) TO PERSONNEL	<del></del>	VISITOR(S) TO PERSONNEL	
EAGLE SERVICES EMPLOYEES		EAGLE SERVICES EMPLOYEES	
LSE'S	<del></del>	LSE'S	
REPORTED BY:		REPORTED BY:	
OFFICE I - PERSONNEL REPO	ORT	OFFICE I - PERSONNEL REPORT	Ţ
. <u>AC</u>	COUNTED FOR	ACCO	DUNTED FOR
PLANT MANAGER (SAM)		PLANT MANAGER (SAM)	
DOMINIQUE AZEMA	<del></del>	DOMINIQUE AZEMA	
L. D. HARRIS		L. D. HARRIS	
E. G. MELIN	<del></del>	E. G. MELIN	<del></del>
HARVEY SAVAGE	<del></del>	HARVEY SAVAGE	
PERSONNEL SUPERVISOR (JANE)		PERSONNEL SUPERVISOR (JANE)	
EMPLOYEE RELATIONS SUPER (DAN)		EMPLOYEE RELATIONS SUPER (DAN)	
SAFETY TECHNICIAN (DAVE)		SAFETY TECHNICIAN (DAVE)	
ADMINISTRATIVE SECRETARY (MARCIA)		ADMINISTRATIVE SECRETARY (MARCIA)	
PERSONNEL SECRETARY (ELAINE)	· ·	PERSONNEL SECRETARY (ELAINE)	
PERSONNEL SECRETARY (ALMA)		PERSONNEL SECRETARY (ALMA)	
RECEPTIONIST (JUNE)		RECEPTIONIST (JUNE)	
NURSE (BETTY)		NURSE (BETTY)	
DOCTOR		DOCTOR	
VI )R(S) TO PERSONNEL		VICITOR(C) TO DERCONNEL	
	<del></del>	VISITOR(S) TO PERSONNEL	
		EAGLE SERVICES EMPLOYEES	
EAGLE SERVICES EMPLOYEES _SE'S		• •	

#### HEAD COUNT PROCEDURE

When an alarm sounds, all must be responsible for reporting to the appropriate areas for head count. Fire alarm areas are now mapped out in the cafeteria and in the basement for a tornado. Plant evacuation is at the front fence. The procedure is nothing new and must be put back in place to assure that all personnel can be accounted for in a timely fashion.

Area heads need to know who they are responsible for each shift, and take charge of head count for those people or be assured someone in their areas will be. Head count slips should be taken to the Head Count Coordinator ASAP at the guard shack during fire alarm or plant evacuation and in the basement near receiving elevator for tornado alarm. After reporting, return to your designated area at once. It is a must to refrain from radio use unless you are called, as not to interfere with the many important calls that need to be made. The guard shack is not a meeting place for supervision, unless you are requested to be there don't be.

It would probably be helpful for certain areas to mark on the schedule each week the person responsible for head count and be assured each shift has someone.

These actions <u>must</u> take place if we are to be able to get a quick and accurate head count to aid the fire brigade in locating someone who might be missing.

Thank you in advance for your cooperation on this matter.

#### Head Count Coordinator's

- P.S. THERE HAVE BEEN SOME CHANGES AS TO THE GROUPING OF CERTAIN AREAS PLEASE NOTE THESE:
  - O OFFICE AREA IS TO BE ACCOUNTED FOR AS 1ST FLOOR OFFICE AND 2ND FLOOR OFFICE.
  - o PT CLEANING IS SEPARATE AS IS
  - o SHIPPING, RECEIVING, YARD GANG
  - o SOLVENT RECOVERY IS PART OF RESIN.

PLEASE MAKE <u>SURE</u> THERE IS SOMEONE RESPONSIBLE FOR EACH OF THESE AREAS.

DATE: 11/15/89 S.D.: 4/11/89

CT: EMERGENCY CONTROL PLAN FOR FIRES, EXPLOSIONS, AND RELEASE OF FUMES OR VAPORS.

OCEDURE IS AN EMERGENCY CONTROL ACTION PLAN WHICH DESCRIBES HOW ASTER CONTROL ORGANIZATION IS TO RESPOND IN AN EMERGENCY CAUSED RES, EXPLOSIONS, OR RELEASE OF VAPORS AND FUMES.

#### OUTLINE.

- A. DISASTER CONTROL ORGANIZATION AND RESPONSIBILITIES (DAY SHIFT)
- B. DISASTER CONTROL ORGANIZATION AND RESPONSIBILITIES (OFF SHIFT)
- C. RESPONSE TO AN ALARM.
- D. RELEASE OF FUMES OR VAPORS SPECIAL CONSIDERATIONS

#### II. DETAIL.

#### A. DISASTER CONTROL ORGANIZATION AND RESPONSIBILITIES (DAY SHIFT)

THE RESPONSIBILITIES FOR EACH MEMBER OF THE DISASTER CONTROL ORGANIZATION ARE OUTLINED BELOW. FOR MORE COMPLETE JOB DESCRIPTIONS SEE PROCEDURE 19, SECTION B.

#### PLANT MANAGER

- 1. REPORTS TO THE GATEHOUSE.
- 2. PROVIDES GUIDANCE TO THE PROTECTION COORDINATOR.

#### PROTECTION COORDINATOR (Area Coordinator Resin)

- 1. REPORTS TO GATEHOUSE WITH RADIO AND DISASTER KIT.
- 2. IN CHARGE OF ALL EMERGENCY ACTIVITIES, INITIATES MISSING PERSONS SEARCH, PLANT EVACUATION, ALL CLEAR, ETC.

#### ASSISTANT PROTECTION COORDINATOR (Manufacturing/Planning Supv)

1. ASSUMES RESPONSIBILITIES OF PROTECTION COORDINATOR IN HIS ABSENCE.

# HEAD COUNT COORDINATOR (12 Hr. Quality Control Operator)

- 1. REPORTS TO GATEHOUSE.
- 2. RESPONSIBLE FOR HEAD COUNT; REPORTS THE RESULTS TO PROTECTION COORDINATOR.

# COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR (Manufacturing/Planning/Supervisor)

- 1. REPORTS TO GATEHOUSE.
- 2. KEEPS OUTSIDE TELEPHONE LINES OPEN.
- 3. DEALS WITH PRESS; SETS UP PRESS ROOM IN MAIN

CONFERENCE ROOM OR CREDIT UNION BUILDING.

# ASSISTANT COMMUNICATIONS / PUBLIC AFFAIRS COORDINATOR (Plant Manager)

- 1. REPORTS TO THE GATEHOUSE.
- 2. AWAITS ASSIGNMENT FROM COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR.
- 3. IF PRESS IS INVOLVED, WILL DIRECT PRESS TO PRESS ROOM.
- 4. ASSUMES RESPONSIBILITIES OF COMM/PUBLIC AFFAIRS COORD. IN HIS ABSENCE.

#### TRANSPORTATION COORDINATOR (Receiving Supv. - Service)

- 1. REPORTS TO GATEHOUSE FOR DIRECTIONS THEN TO MAIN GATE.
- 2. LIMITS ENTRY INTO THE PLANT TO AUTHORIZED PEOPLE AND VEHICLES.
- 3. DIRECTS EMERGENCY VEHICLES TO PROPER LOCATION.

# ASSISTANT TRANSPORTATION COORDINATOR (Misc. Services Supv.)

- 1. REPORTS TO GATEHOUSE FOR DIRECTION, THEN TO MAIN GATE.
- 2. AWAITS ASSIGNMENT FROM TRANSPORTATION COORDINATOR.

### MEDICAL COORDINATOR (Plant Physician)

1. REPORTS TO MEDICAL.

#### ASSISTANT MEDICAL COORDINATOR (Nurse)

1. REPORTS TO MEDICAL.

#### DISASTER COORDINATOR (Area Coordinator Maintenance)

- 1. REPORTS TO FIRE ALARM BOX WITH RADIO.
- RESPONSIBLE FOR MAINTAINING FIRE SYSTEM OPERATION.
- 3. RECOMMENDS PROPER METHODS FOR UTILIZING SHUTDOWN AT SCENE.
- 4. AVAILABLE FOR OVER-ALL GUIDANCE.
- 5. PLANT CONTACT WITH TOLEDO FIRE DEPARTMENT.

# SPECIAL HAZARDS COORDINATOR (Quality Control Supervisor)

- 1. REPORTS TO GATEHOUSE.
- 2. POINTS OUT AVAILABLE ADVICE ON POSSIBLE CHEMICAL OR VAPOR EXPOSURES AND RECOMMENDS THE PROPER PROTECTIVE EQUIPMENT FOR FIRE FIGHTING OR DECONTAMINATION.

# ASSISTANT SPECIAL HAZARDS COORDINATOR (Production Quality Assurance Supervisor)

- 1. REPORTS TO GATEHOUSE.
- 2. AWAITS ASSIGNMENTS FROM SPECIAL HAZARDS COORDINATOR.

# BRIGADE CHIEF (Resin Supervisor)

- 1. REPORTS TO FIRE ALARM BOX WITH RADIO.
- 2. DIRECTS THE ACTIVITIES OF THE FIRE BRIGADE.

# EMERGENCY VEHICLE

- 1. DRIVEN TO NEAREST HOSE HOUSE BY A MEMBER OF THE FIRE BRIGADE.
- 2. A RADIO IS LOCATED INSIDE THE EMERGENCY VEHICLE.

#### GUARD

- 1. REPORTS TO THE GATEHOUSE.
- 2. CALLS THE FIRE DEPARTMENT WHEN ALARM SOUNDS.
- 3. PROVIDES ASSISTANCE WHEREVER IT IS NEEDED.

# B. DISASTER CONTROL COORDINATOR AND RESPONSIBILITIES (Off Shift).

THE RESPONSIBILITIES OF THE OFF-SHIFT DISASTER CONTROL ORGANIZATION ARE OUTLINED BELOW.

#### PROTECTION COORDINATOR / BRIGADE CHIEF

#### (Resin Supervisor/Brigade Captain

- 1. REPORTS TO FIRE ALARM BOX WITH RADIO.
- 2. IN CHARGE OF ALL EMERGENCY ACTIVITIES.
- 3. DIRECTS THE FIRE BRIGADE AND IS THE CONTACT WITH THE TOLEDO FIRE DEPARTMENT.
- 4. INITIATES MISSING PERSONS SEARCH, PLANT EVACUATION, ALL CLEAR, ETC.

# DISASTER COORDINATOR (Area Coordinator Maintenance)

1. CALLED-IN AS NEEDED.

# SPECIAL HAZARDS COORDINATOR (Quality Control Supt.)

1. CALLED-IN AS NEEDED.

# COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR (Manufacturing / Planning/Supervisor)

1. CALLED-IN AS NEEDED.

# HEAD COUNT COORDINATOR (12 Hour Quality Control Operator)

- 1. REPORTS TO THE GATEHOUSE.
- 2. COORDINATES HEAD COUNT AND REPORTS RESULTS TO BRIGADE

CHIEF.

# TRANSPORTATION COORDINATOR (Guard Until Day Coordinator is Called-In)

1. CALL-ED IN AS NEEDED.

#### GUARD .

- 1. REPORTS TO THE GATEHOUSE.
- 2. CALLS THE FIRE DEPARTMENT WHEN ALARM SOUNDS.
- 3. INITIATES CALL-IN PROCEDURE WHEN ADVISED BY BRIGADE CHIEF/BRIGADE CAPTAIN.
- 4. PROVIDES ASSISTANCE WHENEVER IT IS NEEDED.

#### C. RESPONSE TO AN ALARM

ALL PEOPLE ASSIGNED DISASTER CONTROL DUTIES REPORT TO THEIR DESIGNATED LOCATIONS AND PERFORM THEIR DUTIES.

THE SELECTED RESIN AREA OPERATORS REMAIN WITH THEIR REACTORS UNTIL THE RESIN AREA EVACUATION SIREN IS SOUNDED.

THE DECISION ON WHETHER OR NOT TO EVACUATE RESIN WILL BE MADE BY THE BRIGADE CHIEF. IF THE DECISION TO EVACUATE IS MADE, THE DISASTER CHIEF WILL NOTIFY THE RESIN OPERATOR BY RADIO (Located in "K" Bldg. Control Room) WHO WILL PULL THE RESIN EVACUATION SIREN WHICH IS LOCATED NEAR THE DOOR ON THE NORTH END OF 1-G ALLEYWAY.

THE PERSON PULLING THE FIRE ALARM BOX REMAINS THERE TO INFORM THE BRIGADE CHIEF OF THE LOCATION AND DETAILS OF THE EMERGENCY. AFTER THIS HAS BEEN DONE, THE PERSON REPORTS TO HIS DESIGNATED LOCATION.

THE PERSONNEL IN THE AREA SHOULD ATTEMPT TO FIGHT "SMALL" FIRES USING HAND-HELD EXTINGUISHERS UNTIL THE BRIGADE ARRIVES. AT THE TIME, THE AREA PERSONNEL SHOULD REPORT TO THEIR RALLY POINT.

ALL OTHER PERSONNEL SHOULD PERFORM THEIR AREA SHUTDOWN REQUIREMENTS AND THEN EVACUATE IN A PROMPT BUT ORDERLY MANNER. DO NOT TAKE AN EVACUATION ROUTE WHICH WILL ENTER THE AREA OF EMERGENCY.

EMERGENCY SHUT-OFF SWITCHES FOR THE SOLVENT PUMPS IN THE TANK FARMS ARE LOCATED IN THE EAST STAIRWAY OF ENAMELS ON THE 2ND FLOOR AND ON THE NORTH OUTSIDE WALL ACROSS FROM THE NEW PT BUILDING. WHEN A FIRE ALARM IS SOUNDED, THE FIRST PERSON PASSING EITHER ONE OF THESE EMERGENCY SHUT-OFFS SHOULD BREAK THE GLASS. THIS WILL STOP ALL SOLVENT PUMPS FROM OPERATING.

THE FIRE BRIGADE WILL FIGHT THE FIRE UNTIL IT IS RELIEVED BY THE TOLEDO FIRE DEPARTMENT. THE DISASTER COORDINATOR WILL REMAIN AT THE SCENE AND ASSIST THE FIRE DEPARTMENT AS REQUESTED.

THE PROTECTION COORDINATOR WILL INSTRUCT THAT THE "ALL-CLEAR" BE SOUNDED AS SOON AS ALL PERSONNEL ARE ACCOUNTED FOR AND THE EMERGENCY IS UNDER CONTROL.

# D. RELEASE OF FUMES OR VAPORS - SPECIAL CONSIDERATIONS

A LARGE FUME OR VAPOR RELEASE HAS DISASTER POTENTIAL BECAUSE IT CAN ENVELOP AN AREA BEFORE THE OCCUPANTS REALIZE THAT THERE IS A PROBLEM. THE FUMES OR VAPORS CAN BE TOXIC OR FLAMMABLE OR BOTH. LARGE SPILLS CAN GENERATE DANGEROUS VAPOR CONDITIONS. THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED IN HANDLING A FUME OR VAPOR RELEASE:

PULL THE FIRE ALARM. THE IMMEDIATE NEED IS TO ALERT ALL PEOPLE IN THE PATH OF THE FUMES AND EVACUATE THE AFFECTED AREA. IF THE RELEASE IS OF A LARGE MAGNITUDE, THE GUARD SHOULD BE INSTRUCTED TO SOUND THE EVACUATION ALARM.

THE BRIGADE CHIEF WILL EVACUATE THE HAZARD AND DECIDE HOW TO CONTROL IT AND THE TYPE OF PROTECTIVE EQUIPMENT IS NEEDED. THE BRIGADE CHIEF WILL ADVISE ON WHETHER AN ELECTRICAL SHUTDOWN AT THE BREAKER SHOULD BE PERFORMED. NO ONE SHOULD ENTER THE AFFECTED AREA UNTIL A PLAN OF ATTACK HAS BEEN FORMULATED AND APPROPRIATE PROTECTIVE EQUIPMENT (including Scott Air Pak) IS WORN. IN GENERAL, IT IS ADVISABLE TO VENTILATE THE AREA SO THAT THE VAPORS CAN BE DISPERSED; HOWEVER, CAUTION MUST BE TAKEN TO ENSURE THAT FLAMMABLE VAPORS ARE NOT DIRECTED TOWARD AN IGNITION SOURCE.

IF THE RELEASE IS SUCH A MAGNITUDE THAT IT WILL AFFECT THE NEIGHBORHOOD, THE TOLEDO FIRE DEPARTMENT SHOULD BE NOTIFIED SO THAT THE NEIGHBORHOOD WILL BE EVACUATED. WIND DIRECTION AND WIND SPEED ARE RECORDED ON THE FIRST FLOOR OF "A" BUILDING ON THE EAST WALL.

. . . . .

DATE: 11/15/89 S.D.: 4/11/89

SUBJECT: EMERGENCY CONTROL PLAN FOR WEATHER EMERGENCIES

THIS PROCEDURE OUTLINES AN EMERGENCY CONTROL ACTION PLAN DESIGNED TO PROTECT PERSONNEL IN THE EVENT OF SEVERE WEATHER SUCH AS TORNADOES, HURRICANES, WIND STORMS, SEVERE LIGHTNING, EARTHQUAKES, ETC. THE PROCEDURE PROVIDES FOR ADEQUATE WARNING, AN ORDERLY SHUTDOWN OF THE PLANT, AND EVACUATION TO THE SAFEST PORTION OF THE BUILDING STRUCTURE IN 1-A BASEMENT.

# I. OUTLINE.

- A. DECISION TO ACTIVATE EMERGENCY PROCEDURE.
- B. EVACUATE PROCEDURE.
- C. SOUNDING THE ALL CLEAR.
- D. TORNADO INFORMATION.

#### II. DETAIL.

### A. DECISION TO ACTIVATE EMERGENCY PROCEDURE.

IN TIMES OF SEVERE WEATHER, THE PROTECTION COORDINATOR (Engineering/Control/Mechanical Supt.) ON DAYS, AND THE BRIGADE CHIEF (Resin Supervisor) ON OFF-SHIFTS WILL NOTIFY THE GUARD TO ACTIVATE THE INSIDE EVACUATION ALARM WHENEVER HE FEELS THAT EMERGENCY PRECAUTIONS ARE ADVISABLE. HE WILL ALSO HAVE THE ALARM ACTIVATED WHENEVER A TORNADO WARNING IS SOUNDED BY THE LOCAL AUTHORITIES.

THE SIGNAL FOR SEVERE WEATHER ALERT IS 2-2-2 RINGS REPEATEDLY.

#### B. EVACUATION PROCEDURE.

1. AS SOON AS THE SEVERE WEATHER ALARM HAS BEEN SOUNDED, ALL PERSONNEL SHALL CARRYOUT THE SHUTDOWN PROCEDURES FOR THEIR AREAS, LEAVE THEIR WORK AREAS, AND ASSEMBLE AT DESIGNATED LOCATIONS IN BUILDING 1-A BASEMENT. IF POSSIBLE, THE PROTECTION COORDINATOR SHALL ALERT SUPERVISION IN ADVANCE TO PERMIT A MORE ORDERLY SHUTDOWN OF OPERATIONS.

RESPONSIBLE SUPERVISION SHALL INSURE THAT VISITORS, CONTRACTOR EMPLOYEES, TRUCK DRIVERS, ETC., ARE ESCORTED TO 1-A BASEMENT AND ACCOUNTED FOR ON THE GUARD'S RECORD.

#### 2. WATCHMAN RESPONSE.

AFTER THE ALARM IS SOUNDED, THE GUARD SHALL CLOSE THE VEHICLE AND PEDESTRIAN GATES (gates shall not be locked) AT THE PLANT ENTRANCE. HE SHALL THEN TAKE THE POLICE RADIO RECEIVER, THE RADIO BROADCAST RECEIVER, THE PORTABLE CELLULAR PHONE AND THE VISITOR REGISTER TO BUILDING 1-A BASEMENT CONTROL CENTER.

### 3. RESPONSE BY PLANT EMERGENCY GROUPS.

MEMBERS OF THE PLANT DISASTER CONTROL ORGANIZATION AND FIRE BRIGADE SHALL ASSEMBLE AT DESIGNATED LOCATIONS IN 1-A BASEMENT. THEY SHALL REMAIN THERE ON A STANDBY BASIS TO CONTROL FIRES OR OTHER CONDITIONS WHICH MAY DEVELOP DURING THE EMERGENCY.

# 4. PERSONNEL INVENTORY.

FIRST LINE SUPERVISORS SHALL CHECK FOR COMPLETE EVACUATION OF THEIR AREAS, ACCOUNT FOR EACH INDIVIDUAL UNDER THEIR SUPERVISION, AND PROMPTLY SEND A "PERSONNEL INVENTORY CARD" TO THE HEAD COUNT (Quality Control Operator). THE HEAD COUNT COORDINATOR SHALL ADVISE THE PROTECTION COORDINATOR OF THE INVENTORY OF PERSONNEL PROMPTLY AND OF ANY SUBSEQUENT CHANGES. THIS SHALL INCLUDE THE ACCOUNTING FOR VISITORS, CONTRACTOR'S EMPLOYEES, TRUCK DRIVERS, HOLDOVERS FROM PREVIOUS SHIFTS, ETC., AS DETERMINED FROM THE GUARD'S RECORDS.

#### 5. LEAVING THE PLANT DURING EMERGENCY.

PERSONS WHO CHOOSE TO LEAVE THE PLANT SHALL BE PERMITTED TO DO SO AFTER THEY HAVE REPORTED TO THEIR SUPERVISION. VISITORS, CONTRACTOR'S EMPLOYEES, ETC., SHALL BE PERMITTED TO LEAVE AFTER THEY HAVE BEEN CHECKED OUT ON THE GUARD'S RECORDS.

#### 6. COMMUNICATIONS.

ALL DISASTER COORDINATORS SHALL CARRY THEIR TWO-WAY RADIOS WHEN REPORTING TO 1-A BASEMENT FOR POSSIBLE USE DURING AN EMERGENCY. THE OUTSIDE TELEPHONE LINES SHALL BE SWITCHED TO AVAILABLE PHONES IN 1-A BASEMENT PRIOR TO EVACUATION. THIS SHALL BE DONE BY THE TELEPHONE OPERATOR ON THE DAY SHIFT AND BY THE GUARD ON OFF-SHIFTS.

OUTSIDE NEWS SHALL BE RECEIVED VIA THE RADIO BROADCAST RECEIVER AND THE POLICE RECEIVER BROUGHT TO THE CONTROL CENTER BY THE GUARD.

#### C. SOUNDING THE "ALL CLEAR".

THE DECISION TO SOUND THE ALL CLEAR WILL BE MADE BY THE PROTECTION COORDINATOR WITH SAFETY AND SECURITY FOREMOST IN HIS MIND. THE GUARD WILL BE INSTRUCTED TO SOUND THE CLEAR SIREN WHICH IS LOCATED AT THE GATEHOUSE.

DATE: 11/15/89 S.D.: 4/11/89

# SUBJECT: EMERGENCY CONTROL PLAN FOR CIVIL DISORDERS.

THIS PROCEDURE OUTLINES AN EMERGENCY CONTROL ACTION PLAN TO PROTECT PLANT PERSONNEL IN THE EVENT OF A BOMB THREAT OR OTHER PUBLIC EMERGENCIES.

#### I. OUTLINE.

- A. BOMB THREAT.
- B. RIOTS OR DEMONSTRATIONS.

# II. DETAIL.

#### A. BOMB THREAT

#### 1. RECEIVING A BOMB THREAT.

ANY INFORMATION RECEIVED CONCERNING THE POSSIBILITY OF EXPLOSIVE OR INCENDIARY DEVICES BEING PRESENT ON THE PLANT SHOULD BE CONSIDERED AS FACTUAL AND REFERRED TO THE PROTECTION COORDINATOR FOR PROMPT ACTION. IT IS IMPORTANT TO EXTRACT AS MUCH INFORMATION AS POSSIBLE FROM THE PARTY MAKING THE THREAT. THE FORMS ATTACHED, SHOW THE TYPE OF INFORMATION WHICH IS IMPORTANT. THESE FORMS ARE AVAILABLE AT THE PLANT SWITCHBOARD AND AT THE GUARDHOUSE FOR READY REFERENCE BY THOSE RECEIVING A THREAT.

#### 2. SOUNDING THE ALARM.

THE PROTECTION COORDINATOR WILL INSTRUCT THE GUARD TO SOUND THE "BOMB SCARE EVACUATION" WHICH IS 9-9-9 RINGS REPEATEDLY ON THE A.D.T. SYSTEM. THE GUARD WILL CALL THE POLICE AND FIRE DEPARTMENTS, NOTIFYING THEM OF THE NATURE OF THE EMERGENCY AND REQUESTING ASSISTANCE. ON OFF SHIFTS, THE GUARD SHALL NOTIFY THE BRIGADE CHIEF (Resin Supervisor).

#### 3. EVACUATION PROCEDURE.

UPON HEARING THE EVACUATION ALARM, EACH AREA WILL FOLLOW ITS SHUTDOWN PROCEDURE AND THEN EVACUATE TO THE FENCE ALONG TREMAINSVILLE ROAD. HEAD COUNT WILL BE HANDLED IN THE USUAL MANNER AND REPORTS GIVEN TO THE HEAD COUNT COORDINATOR.

THE PLANT MANAGER, PROTECTION COORDINATOR, DISASTER COORDINATOR, BRIGADE CHIEF, COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATOR, SPECIAL HAZARDS COORDINATOR, AND HEAD COUNT COORDINATOR SHALL REPORT TO THE GUARD HOUSE (Command Center). THE ALTERNATE LOCATION IS THE CREDIT UNION BUILDING.

THE TRANSPORTATION COORDINATOR WILL REPORT TO THE MAIN GATE AND LIMIT ENTRANCE TO THE PLANT TO AUTHORIZED VEHICLES ONLY.

#### 4. BOMB SEARCH.

WHEN REQUESTED BY THE PROTECTION COORDINATOR, THE BRIGADE CHIEF WILL ORGANIZE A SEARCH FOR THE EXPLOSIVE DEVICE. THE POLICE AND FIRE DEPARTMENTS WILL BE UTILIZED FOR THE SEARCH ALONG WITH MEMBERS OF THE DISASTER CONTROL ORGANIZATION AND VOLUNTEERS FROM THE WAGE ROLL.

ONCE A BOMB OR SUSPICIOUS OBJECT IS LOCATED, IT SHOULD NOT BE TOUCHED IN ANY WAY BY PLANT PERSONNEL. POLICE OR FIRE DEPARTMENT EXPERTS SHOULD BE CALLED TO INVESTIGATE AND TO HANDLE REMOVAL, AS NECESSARY.

#### 5. SOUNDING THE ALL CLEAR.

ANY DECISION TO RETURN PEOPLE TO WORK OR TO SEND THEM HOME WILL BE MADE BY THE PROTECTION COORDINATOR BASED UPON HIS CONSULTATIONS WITH THE POLICE DEPARTMENT AND OTHER MEMBERS OF MANAGEMENT. THE "ALL CLEAR" SIREN SHALL BE SOUNDED FOR 5 SECONDS TO RETURN PEOPLE TO WORK FOLLOWING THE EMERGENCY.

#### 6. RIOTS AND DEMONSTRATION.

THE POTENTIAL FOR RIOTS, DEMONSTRATIONS, OR OTHER DISORDERS OCCURRING NEAR THE PLANT IS CONSIDERED MINIMAL; HOWEVER, IF SUCH OCCUR, PROMPT MEASURES MAY BE NECESSARY TO PROTECT EMPLOYEES AND PROPERTY.

IF SUCH A DISORDER IS DEVELOPING, THE PROTECTION COORDINATOR WILL SUMMON THE DISASTER CONTROL ORGANIZATION TO THE GATE HOUSE. THE PROTECTION COORDINATOR WILL EVALUATE THE SITUATION AND TAKE THE APPROPRIATE ACTION. ACTIONS TO CONSIDER ARE:

- O EVACUATING PERSONNEL TO 1-A BASEMENT
- o ORGANIZING THE BRIGADE
- o PERIMETER PATROLS
- o ESTABLISHING OBSERVATION POSTS ON BLDG. ROOFS, ETC.

IT IS THE TRANSPORTATION COORDINATORS RESPONSIBILITY TO SECURE ALL GATES AND TO WORK WITH THE TOLEDO POLICE DEPARTMENT TO ENSURE FENCE-LINE PROTECTION. POLICE ESCORT OF PERSONNEL TO AND FROM THE JOB MAY BE REQUIRED OR IT MAY BE NECESSARY TO TRANSPORT EMPLOYEES TO AND FROM WORK WITH COMPANY VEHICLES OR BY COMMERCIAL MEANS.

IT IS THE COMMUNICATIONS AND PUBLIC AFFAIRS COORDINATORS RESPONSIBILITY TO KEEP EMPLOYEES AWAY FROM THE PLANT INFORMED OF THE SITUATION. THIS CAN BE ACCOMPLISHED BY MEANS OF TELEPHONE, RADIO, OR TELEVISION. THE POLICE RADIO, LOCATED IN THE GATEHOUSE SHOULD BE MONITORED.

(

# BOMB THREAT CHECKLIST

INSTRUCTIONS: "I	ISTEN" !! - Do Not Interru	pt the Caller !!
NAME OF OPERATOR:	TIME:	
CALLER'S IDENTITY:	Approximate Age:	Years:
	ce Booth Internal (If Intern	(From Within Bldg.)
		LANGUAGE
Loud Soft	SPEECHSlow	Excel Good
High Pitch Deep	DistinctDistorted	Fair Poor
RaspPleasan	tStutterNasal	Foul Other
IntoxicatedOther	SlurredOther	
ACCENT:		
LocalNot Local _		OfficeTraffic
ForeignCaucasian _	_RationalIrrational	FactoryAirplane
RaceRegion _	_CoherentIncoherent	BedlamTrains
	_DeliberateEmotional	
_	_RighteousLaughing	QuietMusic
	-	MixedParty
WITH CALLER'S PERMISSION	, ASK:	
Where Is It Planted ?	Certain Hour: Time Building: Area	a:
<u>Did the caller appear fa</u> <u>description of the bomb</u>	miliar <u>with Plant or build: location ?</u>	ing by his
ACTION TO TAKE IMMEDIATE	LY AFTER CALL:	
NOTIFY YOUR SUPERVISOR. SUPERVISOR.	TALK TO NO ONE OTHER THAN	INSTRUCTED BY YOUR
Write out the message in	its entirety:	
		<del></del>
Remarks:		

# THREATENING PHONE CALL FORM

TIME CALL RECEIVED:	TIME CALLER HUNG UP:
·	CALL:
QUESTIONS TO ASK:	
1. WHEN IS THE BOMB GOING TO EXP	LODE ?
3. WHAT KIND OF BOMB IS IT ?	
4. WHAT DOES IT LOOK LIKE ?	
5. WHY DID YOU PLACE THE BOMB ?	
	HE CALL:
DEPARTMENT:	TELEPHONE NO.:
HOME ADDRESS:	
HOME TELEPHONE NO.:	
DATE:	

# DESCRIPTION OF CALLER'S VOICE

MALE:	 FEMALE: _		
YOUNG: MIDDLE			
TONE OF VOICE:	 ···	·	
BACKGROUND NOISE:			
IF VOICE IS FAMILIAR:			
IF SO, WHO DID IT SOUND LIKE			
REMARKS:			

DATE: 11/15/89 S.D.: 4/11/89

SUBJECT: EMERGENCY CONTROL PLAN FOR INDUSTRIAL INCIDENTS EXTERNAL TO THE PLANT.

THIS PROCEDURE IS AN EMERGENCY CONTROL ACTION WHICH DESCRIBES HOW TO PROTECT PLANT PERSONNEL AND PROPERTY FROM INDUSTRIAL EMERGENCIES EXTERNAL TO THE PLANT.

#### I. OUTLINE:

- A. EXTERNAL EXPLOSIONS FOR FIRES.
- B. RAILROAD EMERGENCIES.

#### II. DETAIL.

#### A. EXTERNAL EXPLOSIONS OR FIRES.

THE POTENTIAL FOR EXTERNAL EXPLOSIONS OR FIRES HAVING AN IMPACT ON THE PLANT IS MINIMAL; HOWEVER, UNDER PROPER WEATHER CONDITIONS BURNING DEBRIS COULD REACH THE PLANT FROM A LOCAL HOUSE FIRE OR FROM A FIRE EXPLOSION AT THE CLOSEST INDUSTRIAL ESTABLISHMENT.

THE PROTECTION COORDINATOR SHOULD BE NOTIFIED IMMEDIATELY OF AN EXTERNAL FIRE, AND HE WILL USE HIS TWO-WAY RADIO TO GET THE DISASTER CONTROL ORGANIZATION TOGETHER IN THE GATEHOUSE. THE PROTECTION COORDINATOR WILL EVALUATE THE SITUATION AND TAKE THE APPROPRIATE ACTION. ACTIONS TO CONSIDER ARE A FIRE WATCH; PULLING FIRE HOSES; WETTING DOWN BUILDINGS; SHUTDOWN OF PLANT OPERATIONS; ETC. IF THE EMERGENCY OCCURS ON THE OFF SHIFTS, THE GUARD SHOULD NOTIFY THE BRIGADE CHIEF (Resin FLS).

#### B. RAILROAD EMERGENCIES.

THE RAILROAD RUNS ALONG THE WEST PERIMETER OF THE PLANT AND THIS MEANS THAT THE PLANT COULD BE EXPOSED TO RAILROAD EMERGENCIES SUCH AS FIRES, EXPLOSIONS, SPILLS, AND FUMES. THE POTENTIAL FOR THIS TYPE OF EMERGENCY OCCURRING IS MINIMAL BECAUSE THE USE OF THE TRACK IS INFREQUENT AND TRAINS OPERATE AT VERY LOW SPEEDS OVER THIS SECTION OF TRACK.

IF A RAIL EMERGENCY OCCURS, THE PROTECTION COORDINATOR SHOULD BE NOTIFIED IMMEDIATELY, AND HE WILL SUMMON THE DISASTER ORGANIZATION TO THE GATEHOUSE. BECAUSE THE TYPE OF EMERGENCIES CAN BE DIFFERENT, THE PROTECTION COORDINATOR SHOULD EVALUATE EACH SITUATION, OBTAIN ADVICE FROM THE DISASTER CONTROL COORDINATOR AND RAILROAD, AND THEN TAKE THE APPROPRIATE ACTION. ACTIONS TO CONSIDER ARE ESTABLISHING A FIRE WATCH; PLANT EVACUATION; WET DOWN BUILDINGS (Water cannons are available); MONITOR POLICE RADIO, ETC. ON OFF SHIFTS THE GUARD SHOULD NOTIFY THE BRIGADE CHIEF. (Resin FLS / Brigade Captain).

DATE: 11/15/89 S.D.: 4/11/89

# SUBJECT: EMERGENCY CONTROL PLAN FOR DELIBERATE DAMAGE.

SEVERAL CATEGORIES OF DELIBERATE DAMAGE MAY POSE THREATS TO PERSONNEL AND PROPERTY. THESE INCLUDE MALICIOUS DAMAGE, SABOTAGE, AND DIRECT ACTION INCLUDING THE POTENTIAL OF RADIOACTIVE FALLOUT. THIS PROCEDURE DESCRIBES HOW TO REACT TO THESE TYPES OF EMERGENCIES.

#### I. OUTLINE.

- A. SABOTAGE AND ARSON.
- B. NUCLEAR ATTACK.

# II. DETAIL.

#### A. SABOTAGE AND ARSON.

PROPER SECURITY PROCEDURES ARE ESSENTIAL IN PREVENTING SABOTAGE AND ARSON. FOR THAT REASON THE FOLLOWING PROCEDURES ARE IN EFFECT:

- 1) NO VISITORS OR CONTRACTORS ARE ALLOWED ONTO THE PLANT UNLESS THEY SIGN IN AT THE GATEHOUSE AND THEN ARE GIVEN PERMISSION BY A MEMBER OF MANAGEMENT TO ENTER.
- 2) PARKING OF CARS, PALLETS, DRUMS, TOOLS, OR OTHER MATERIALS THAT MIGHT BE USED AS A STEPLADDER IS NOT ALLOWED WITHIN TEN FEET OF ANY PLANT FENCE.
- 3) FENCES MUST BE INSPECTED ROUTINELY AND BE KEPT IN GOOD REPAIR. REMOVE ANY OVERHANGING TREE LIMBS WHICH MIGHT PROVIDE EASY ACCESS TO THE PLANT.
- 4) EXTERIOR AREAS MUST BE KEPT FREE OF HIGH GRASS OR WEEDS, ESPECIALLY NEAR THE TANK FARMS AND OUTSIDE DRUM STORAGE AREAS.
- 5) ALL PLANT GATES ARE KEPT CLOSED AND LOCKED WHEN THE PLANT IS NOT WORKING.

SHOULD SABOTAGE OR ARSON OCCUR, THE PROTECTION COORDINATOR SHOULD BE IMMEDIATELY NOTIFIED AND HE WILL EVALUATE THE SITUATION AND TAKE APPROPRIATE ACTION. THE ACTION COULD INCLUDE: CALLING THE FIRE OR POLICE DEPARTMENT; PLANT EVACUATION; OR WHATEVER IS DEEMED NECESSARY BY THE PROTECTION COORDINATOR.

### B. NUCLEAR ATTACK.

. . . . .

THE TOLEDO CIVIL DEFENSE SIREN WILL ALERT THE PLANT TO ENEMY ATTACK. THE PLANT WILL RESPOND BY:

- 1) SOUNDING THE WEATHER EVACUATION ALARM (2-2-2 RINGS REPEADEDLY). UPON HEARING THE ALARM, PLANT PERSONNEL WILL SHUTDOWN THEIR EQUIPMENT AND REPORT TO THE 1-A BASEMENT.
- 2) THE PROTECTION COORDINATOR WILL EXPLAIN THE SITUATION TO THE PLANT PERSONNEL AND ADVISE THEM TO GO TO THEIR FAMILIES AND SEEK A PROPER FALLOUT SHELTER.
- 3) FOR THOSE EMPLOYEES WHO WISH TO STAY, THE 1-A BASEMENT IS THE SAFEST SPOT; HOWEVER, IT IS NOT A FALLOUT SHELTER AND NO FOOD OR SUPPLIES ARE STORED THERE.

WRITTEN BY: D. R. AZEMA APPROVED BY:

DATE: JULY 2, 1986

#### SAFETY PROCEDURE NO. 22. HANDLING OF CHEMICALS

# HANDLING CHEMICALS & HAZARDOUS MATERIALS

THIS PROCEDURE IS INTENDED TO BE A COMPREHENSIVE GUIDE OR HANDBOOK FOR SAFE, LEGAL HANDLING OF CHEMICALS. HOWEVER, NO MATTER HOW MANY RULES AND PROCEDURES ARE ESTABLISHED WE CANNOT ANTICIPATE ALL POSSIBLE SITUATIONS THAT ARISE IN USING CHEMICALS. A KNOWLEDGE OF BASIC CHEMISTRY IS HELPFUL FOR SUPERVISORS ENCOUNTERING UNUSUAL SITUATIONS. FAMILIARITY WITH VARIOUS INFORMATION SOURCES IS ALSO HELPFUL.

# DEFINITION OF "CHEMICAL" AND HAZARDOUS MATERIALS

ALL RAW MATERIALS ARE CLASSIFIED AS CHEMICALS AS ARE ALL SUPPLY CHEMICALS. ALL MATERIALS ARE HAZARDOUS IF IMPROPERLY HANDLED.

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- 2. POSSIBLE HAZARDS OF CHEMICALS
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- 5. LOADING CLASSIFICATION
- 6. SUPPLY CHEMICALS
- 7. CHROMATE AND LEAD PIGMENTS
- 8. TSCA TOXIC SUBSTANCES CONTROL ACT
- 9. STORAGE OF HAZARDOUS MATERIALS
- 10. SHIPPING CLASSIFICATION
- 11. STATIC ELECTRICITY & FLASH POINT
- 12. FIRE
- 13. OXIDIZERS, OXIDIZING AGENTS
- 14. EXPLOSION HAZARDS
- 15. MONOMERS
- 16. INITIATOR STORAGE AND HANDLING
- 17. W-349 RED LEAD PIGMENT
- 18. SUPPLY CHEMICAL LIST

HTMCHMENT G-16-1

# GLOSSARY OF TERMS

OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. THIS IS THE GOVERNMENT AGENCY THAT IS ASSIGNED TO ENFORCE RULES GOVERNING THE WORK PLACE.

<u>DOT</u> - DEPARTMENT OF TRANSPORTATION. THIS GOVERNMENT AGENCY MAKES AND ENFORCES RULES GOVERNING SAFE TRANSPORTATION OF MATERIALS.

TERP -TRANSPORATION EMERGENCY RESPONSE PLAN. A PLAN THAT CHEMICAL COMPANIES USE TO RESPOND TO SAFETY PROBLEMS WITH CHEMICALS INVOLED IN ACCIDENTS OR OTHER SPILLAGE DURING SHIPPING.

RHYTHM - A DU PONT ACRONYM MEANING "REMEMBER HOW YOU TREAT HAZARDOUS MATERIALS".

RCRA - RESOURCE CONSERVATION AND RECOVERY ACT.

#### SECTION #1.

#### FUNDAMENTAL SAFETY RULES TO BE OBSERVED IN HANDLING ALL CHEMICALS

- A. NO MATERIAL IS TO BE EATEN
- B. HANDS MUST BE WASHED BEFORE EATING OR SMOKING WHENEVER ANY CHEMICALS HAVE BEEN HANDLED.
- C. NO FOOD MAY BE STORED OR EATEN IN OPERATING OR PLANT STORAGE AREAS.
- D. CONTAINERS MUST BE KEPT CLOSED WHEN NOT IN USE.
  SPILLED MATERIALS MUST BE CLEANED UP IMMEDIATELY USING
  SAFE METHODS.
- E. AVOID ALL UNNECESSARY SKIN CONTACT, BREATHING OR OTHER EXPOSURE TO CHEMICALS. IN CASE OF ACCIDENTAL CONTACT WASH THE AFFECTED SKIN WITH PLENTY OF SOAP AND WATER AND CONSULT INFORMATION TO DETERMINE IF FURTHER FIRST AID, ETC. IS NEEDED.
- F. WEAR RESPIRATORS WHEN WORKING WITH DUSTY MATERIALS.
- G. ALL CLOTHING CONTAMINATED WITH ANY CHEMICAL SHOULD BE THOROUGHLY WASHED. CHECK TO DETERMINE IF THE CLOTHING MUST BE DECONTAMINATED IN A SPECIAL WAY OR DISCARDED.

SECTION 2.

#### POSSIBLE HAZARDS OF CHEMICALS

**HEALTH** 

CORROSIVE (BURNS YOUR SKIN)
TOXIC IMMEDIATELY (POISON)
TOXIC LONG TERM (SLOW POISON)
TOXIC PRODUCTS IN FIRE

FIRE

LOW FLASH POINT (EASY TO IGNITE) STATIC HAZARD SPONTANEOUS COMBUSTION TOXIC PRODUCTS IN FIRE

REACTIVITY

UNSTABLE ON AGING REACTS WITH OTHER CHEMICALS

# HOW INJURIES OCURR

#### SWALLOW CHEMICAL

FAILURE TO WASH HANDS EATING OR FOOD STORAGE IN AREA BY CHEMICAL SMOKING CONTAMINATED CIGARETTES (TEFLON)

### ABSORB CHEMICAL THROUGH SKIN

DELIBERATE EXPOSURE LACK OF GLOVES, ETC. FAILURE TO REMOVE CONTAMINATED CLOTHES LACK OF BOOTS, ETC.

#### BREATHE - IN CHEMICAL

PROPER VENTILATION - EXHAUST
NO RESPIRATOR
FAULTY RESPIRATOR
POOR-FITTING RESPIRATOR, VALVES, CARTRIDGES
WRONG RESPIRATOR

# SOURCES OF FURTHER INFORMATION

SPECIFICATION SHEETS
MATERIAL SAFETY DATA SHEETS
ASK HAZARDOUS MATERIALS COMMITTEE
SPILL PRACTICE

CONTROL LAB. FILES

# SECTION 3 HMIS/S-CODE SYSTEM

ALL MATERIALS FOR IN-PLANT USE WILL BE LABELED FOLLOWING PROTOCOL FOR HAZARDOUS MATERIALS IDENTIFICATION OF THE NATIONAL PAINT AND COATINGS ASSOCIATION (NPCA) RAW MATERIALS RATING MANUAL. A COPY OF THIS MANUAL IS AVAILABLE IN THE OCCUPATIONAL HEALTH COORDINATOR'S BOOKCASE. THIS PROTOCOL DETERMINES H, F, AND R LABELS.

H = HEALTH

F = FLAMMABILITY

R = REACTIVITY

HMIS POSTERS ARE LOCATED IN ALL SECTIONS OF THE PLANT AND SUMMARIZE THE MEANINGS OF THE H, F, AND R LABELS.

H = HAZARDOUS

M = MATERIALS

I = IDENTIFICATION

S = SYSTEM

HAZARD RATING	(H) HEALTH	(F) FLAMMABILITY	(R) REACTIVITY
O MINIMAL "	NO SIGNIFICANT RISK TO HEALTH.	MATERIALS THAT ARE NORMALLY STABLE AND WILL NOT BURN UNLESS HEATED.	MATERIALS THAT ARE NORMALLY STABLE, EVEN UNDER FIRE CONDITIONS AND WILL NOT REACT WITH WATER.
l SLIGHT	IRRITATION OR MINOR REVERSIBLE INJURY.	FLASHPOINTS AT OR ABOVE 200F.	MATERIALS THAT ARE NORMALLY STABLE BUT CAN BECOME UNSTABLE AT HIGH TEMPERATURES AND PRESSURES.
	TEMPORARY OR MINOR INJURY POTENTIAL.		
3 SERIOUS	HIGHLY TOXIC. MAJOR INJURY PO- TENTIAL. INCLUDES SENSITIZERS AND CORROSIVES.	MATERIALS CAP- ABLE OF IGNITION UNDER ALMOST ALL CONDITIONS. FLASHPOINT BE- TWEEN 73F AND 100F.	MATERIALS THAT ARE CAPABLE OF DETONA- TION OR EXPLOSIVE REACTION BUT REQUIRE A STRONG INITIATING SOURCE OR MUST BE HEATED UNDER CONFINE- MENT BEFORE INITIA-

TION; OR MATERIALS THAT REACT EXPLOSIVE-LY WITH WATER.

4 SEVERE LIFE-THREATENING, MAJOR OR PERMANENT DAMAGE MAY RESULT FROM SINGLE OR REPEATED EXPOSURES.

VERY FLAMMABLE GASES. FLASH-POINT BELOW 73F. MATERIALS THAT ARE READILY CAPABLE OF DETONATION OR EXPLOSIVE DECOMPOSITION AT NORMAL TEMPERATURES AND PRESSURES.

#### S-CODE SYSTEM

THE S-CODE IS PERHAPS THE MOST MISUNDERSTOOD ITEM ABOUT A CHEMICAL. COMMIT THE FOLLOWING TO MEMORY.

"THE S-CODE DOES NOT TELL YOU HOW DANGEROUS A CHEMICAL IS." IT ONLY TELLS WHAT PROTECTIVE EQUIPMENT IS NEEDED FOR NORMAL HANDLING. IT TELLS YOU NOTHING ABOUT FIRE HAZARD, STATIC HAZARD, FIRE-FIGHTING, REACTIVITY.

S-CODE	PROTECTIVE EQUIPMENT
s-0	NONE NORMALLY NEEDED, HOWEVER, REFER TO THE FUNDAMENTAL RULES.
S-1	LEATHER GLOVES + CARTRIDGE FILTER RESPIRATOR + ADEQUATE VENTILATION.
S-2	*SYNTHETIC GLOVES + ADEQUATE VENTILATION **
S-3	SYNTHETIC GLOVES + SYNTHETIC APRON + ACID GOGGLES + ADEQUATE VENTILATION
S-4	SYNTHETIC GLOVES + SYNTHETIC APRON + GOGGLES OR ACID GOGGLES & CARTRIDGE FILTER RESPIRATOR + ADEQUATE VENTILATION.
s-5	AIR LINE MASK OR ADEQUATE VENTILATION WITH FACE SHIELD AND SYNTHETIC GAUNTLETS + SYNTHETIC APRON
S-6	AIR LINE MASK OR ADEQUATE VENTILATION WITH FACE SHIELD AND GOGGLES AND SYNTHETIC GOUNTLETS + SYNTHETIC APRON + SYNTHETIC BOOTS.
S-7	FULL SYNTHETIC SUIT + AIR LINE HOOD + SYNTHETIC GLOVES + SYNTHETIC BOOTS + ADEQUATE VENTILATION.

\*THE TERM "SYNTHETIC" COVERS RUBBER, POLYETHYLENE, "NEOPRENE", AND OTHER IMPERVIOUS MATERIALS.

\*\*ADEQUATE VENTILATION SPECIFIED SHOULD BE SUCH THAT THE MAXIMUM ALLOWABLE CONCENTRATION (MAC) OR DU PONT AEL OF THE MATERIAL IN QUESTION, IS NOT EXCEEDED. WHERE SUCH MAC'S ARE NOT ESTABLISHED, THE VENTILATION SHOULD BE THAT DICTATED BY THE BEST INFORMATION AVAILABLE.

A PICTURIZATION OF "S" CLASSIFICATION PROTECTIVE EQUIPMENT GROUPINGS WILL BE DISPLAYED IN ALL APPROPRIATE AREAS. THIS WILL BE USED AS A REFERENCE BY OPERATORS FOR APPROPRIATE EQUIPMENT FOR EACH "S" CODE. THE FULL S-CODE EQUIPMENT MUST BE WORN WHEN HANDLING ANY CHEMICAL UNLESS A WRITTEN EXCEPTION IS APPROVED BY THE HAZARDOUS MATERIALS COMMITTEE AND IS ON FILE.

THE LABORATORY PROCEDURE L-38 IS AN APPROVED EXCEPTION FOR USE IN THE LABORATORIES.

#### SECTION 4

#### M - CODED MATERIALS AND RESTRICTED MATERIALS

THE LETTER "M" PRECEDING THE S-CODE (MS-1) DESIGNATES A CHRONIC HEALTH HAZARD.

THESE MATERIALS REQUIRE EITHER SPECIAL PROTECTIVE EQUIPMENT NOT ADEQUATELY DESCRIBED BY THE S-CODE SYSTEM OR IT REQUIRES SPECIAL RECEIVING, STORAGE, HANDLING OR DISPOSAL SYSTEM. SPECIAL HANDLING PROCEDURES MUST BE AVAILABLE IN AREAS WHERE USED.

MANY BUT NOT ALL OF THESE M-CODED CHEMICALS ARE CARCINOGENS OR SUSPECTED CARCINOGENS, OR REPRODUCTIVE HAZARDS.

#### I. INTRODUCTION

THIS PRACTICE COVERS THE IDENTIFICATION AND HANDLING OF RESTRICTED MATERIALS AS DESIGNED BY THE DU PONT RESTRICTED MATERIALS LIST. THESE ITEMS ARE IDENTIFIED BY AN "M" BEFORE THE S-CODE.

#### II. OUTLINE

- A. GUIDELINES FOR DESIGNATION OF A "RESTRICTED MATERIAL"
- B. PRECAUTIONARY PROCEDURES (PLANT AND PLANT LABORATORY)
- C. RESPONSIBILITY

#### III. DETAIL

### A. GUIDELINES FOR DESIGNATION OF A "RESTRICTED MATERIAL"

- ANY MATERIAL CLASSIFIED AND REGULATED BY OSHA AS A CARCINOGEN.
- 2. ANY MATERIAL CLASSIFIED BY THE DU PONT "CARCINOGEN GUIDELINES" AS A HUMAN, EXPERIMENTAL, OR SUSPECT CARGINOGEN.
- 3. ANY MATERIAL WHICH HASKELL LABORATORY DETERMINES TO HAVE HIGH CARCINOGENIC, MUTAGENIC, TERATOGENIC, OR EMBRYO TOXIC POTENTIAL.
- 4. ANY MATERIAL WHICH THE DIVISION DIRECTORS OF THE APPROPRIATE BUSINESS, R&D, AND MANUFACTURING DIVISIONS AGREE SHOULD RESTRICTED BECAUSE OF:

  a. DIFFICULTY IN CONTROLLING EXPOSURE
  - b. INADEQUATE TOXICITY INFORMATION
  - c. SUSPICION THAT THE MATERIAL HAS CAUSED SERIOUS INDUSTRIAL HEALTH PROBLEMS

- d. OVERLY BURDENSOME GOVERNMENTAL REGULATION (PRESENT OR ANTICIPATED)
- e. EXTREME TOXICITY.

# B. PRECAUTIONARY PROCEDURES (PLANT AND PLANT LABORATORY)

- 1. THE RESTRICTED MATERIALS LIST IS ISSUED AND MAINTAINED IN ORDER THAT THE MANUFACTURING DIVISION DIRECTORS CAN CONTROL THE USE OF HIGHLY TOXIC AND/OR CARCINOGENIC MATERIALS. A CURRENT COPY IS MAINTAINED IN THE CONTROL LAB.
- 2. UNLESS EXPERIENCE OR SPECIFIC DEMANDS OF THE FORMULATION MAKE IT NECESSARY, THESE RESTRICTED MATERIALS ARE NOT TO BE TESTED OR SAMPLED ON RECEIPT. ACCEPTANCE OF THE VENDOR'S ANALYSIS WILL BE SATISFACTORY. IN SPECIAL CASES WHERE ANALYSIS IS NEEDED TO SOLVE PLANT TECHNICAL PROBLEMS, PROCEDURES SHALL BE SET UP AHEAD OF TIME WITH THE APPROVALS OF THE TECHNICAL SUPERINTENDENT AND THE HAZARDOUS MATERIALS CHAIRMAN.
- 3. EMPLOYEE EXPOSURE MUST BE MAINTAINED BELOW THE LEVELS SPECIFIED BY LAW. THIS IS ACCOMPLISHED BY RESTRICTIVE USE, ENGINEERING CONTROLS, WORK PRACTICES, AND PROTECTIVE EQUIPMENT. LEVELS ARE MONITORED AS IS DEEMED NECESSARY BASED ON AGREEMENT BETWEEN THE TECHNICAL SUPERINTENDENT AND THE PLANT SAFETY ENGINEER.
- 4. THE TOLEDO DEVELOPMENT LABORATORY WILL BE RESPONSIBLE TO SEE THAT LOCAL FORMULAS WHICH CALL FOR THE USE OF ANY RESTRICTED MATERIAL BEYOND THE LIMIT OF PREVIOUS AUTHORIZATIONS BE APPROVED IN ADVANCE BY ALL THREE DIVISION DIRECTORS.
- 5. SEPARATE PROCEDURES (A.O.P.'S OR STANDARD PRACTICES) WILL BE WRITTEN FOR THE HANDLING OF EACH RESTRICTED MATERIAL. IT IS THE RESPONSIBILITY OF THE HAZARDOUS MATERIALS COMMITTEE CHAIRMAN, IN COOPERATION WITH THE TECHNICAL SUPERINTENDENT, TO SEE THAT THESE PROCEDURES ARE REVIEWED AND UPDATED AS NEEDED.
- 6. AT TOLEDO, AN UP-TO-DATE COPY OF THE RESTRICTED MATERIALS LIST WILL BE MAINTAINED IN THE QUALITY CONTROL LABORATORY BY THE HAZARDOUS MATERIALS CHAIRMAN. IT IS HIS RESPONSIBILITY TO CHECK ANY REQUESTS FOR NEW MATERIALS AGAINST THIS LIST AND GET APPROVAL FROM THE TECHNICAL SUPERINTENDENT FOR ANY APPROVALS TO PURCHASE.
- 7. THE TOLEDO MEDICAL DEPARTMENT WILL BE SUPPLIED WITH A

COPY OF THIS PROCEDURE WHICH INCLUDES A RESTRICTED MATERIALS LIST WITH THOSE INGREDIENTS USED AT TOLEDO SO DESIGNATED.

# C. RESPONSIBILITY

- HAZARDOUS MATERIALS COMMITTEE
- MAINTAIN THIS PROCEDURE AND MAKE PERIODIC REVIEWS OF LOCAL COMPLIANCE IN LABORATORIES, PRODUCTION AREAS, AND STORAGE AREAS.
  - KEEP AREA SUPERVISION AND MANAGEMENT ADVISED OF CHANGES IN STATUS OF ANY INGREDIENT AS TO ITS INCLUSION IN RESTRICTED LIST, AND COMPLIANCE BY THE AREAS WITH THIS PROCEDURE.
  - ADVISE RESPONSIBLE AREAS WHEN RESTRICTED MATERIALS SHOULD BE REMOVED FROM PREMISES, DESTROYED, ETC.
  - OBTAIN TECHNICAL SUPERINTENDENT'S APPROVAL BEFORE APPROVING PURCHASE OF NEW ITEMS.
  - MANUFACTURING AREAS
  - SEE THAT EMPLOYEES WORKING IN THE AREA ARE APPRISED OF RESTRICTED MATERIALS IN USE IN THE AREA. AN UP-TO-DATE LIST OF RESTRICTED MATERIALS USED BY THE AREA SHOULD BE POSTED.
  - SEE THAT PRESCRIBED PRECAUTIONS AND PROTECTIVE EQUIPMENT ARE WORN IN COMPLIANCE WITH THIS PROCEDURE.
  - INSTRUCT ALL NEW PERSONS ASSIGNED TO THE AREA IN THE HANDLING OF RESTRICTED MATERIALS USED IN THE AREA.
  - SEE THAT EXPOSURE LEVELS OF RESTRICTED MATERIALS ARE MAINTAINED BELOW THE LEVELS SET BY LAW.
  - WITH THE AID OF THE PLANT SAFETY SUPERVISOR, SEE THAT NECESSARY MONITORING IS DONE TO MAINTAIN REQUIRED LEVELS.
  - ALL TOLEDO LABORATORY FACILITIES
  - SEE THAT PERSONNEL IN THE LABORATORY FOLLOW PRESCRIBED PROCEDURES WHEN USING REAGENTS, CHEMICALS, AND ANY OTHER MATERIALS ON THE RESTRICTED LIST.
  - MAKE SURE PROPER PROTECTIVE EQUIPMENT IS WORN, ESPECIALLY APPROVED RESPIRATOR MASKS WHEN SPRAYING PAINT PRODUCTS CONTAINING RESTRICTED MATERIALS.
  - SAFETY SUPERVISOR

- WILL RUN PERIODIC MONITORING OF AREAS USING RESTRICTED MATERIALS. DETAILS TO BE DEFINED IN COOPERATION WITH THE TECHNICAL SUPERINTENDENT AND DIVISIONAL SUPPORT GROUPS.
- RECEIVING AND STORES
- REPORT ANY RECEIPT OF UNAUTHORIZED RESTRICTED MATERIALS TO TECHNICAL SUPERINTENDENT OR HAZARDOUS MATERIALS CHAIRMAN.
- REPORT ANY RECEIPT OF DAMAGED, LEAKING, OR IMPROPERLY LABELED RESTRICTED MATERIALS TO :(1) THE MISCELLANEOUS AREA SUPERVISOR, (2) THE HAZARDOUS MATERIALS CHAIRMAN, (3) THE PRODUCTION SUPERINTENDENT, AND (4) THE SAFETY SUPERVISOR SO THAT A DECISION MAY BE MADE FOR REPACKAGING, RETURN, OR DISPOSAL.
- PROPER PROTECTIVE EQUIPMENT SHALL BE WORN WHEN HANDLING ANY DAMAGED OR LEAKING CONTAINERS.
- MAKE SURE ALL RESTRICTED MATERIALS ARE LABELED WITH CORRECT MS CODE.
- STORE APPROVED "RESTRICTED MATERIALS" IN ACCORDANCE WITH GUIDELINES IN THE PROCEDURE FOR EACH MATERIAL.
   A LIST OF TOLEDO'S RESTRICTED MATERIALS SHALL BE POSED IN THE RECEIVING AREA.
- RESTRICTED MATERIALS MAY BE STORED ONLY IN SPECIFIED LOCATIONS. EACH STORAGE LOCATION MUST BE IDENTIFIED BY A SIGN. THE SIGN SHOULD STATE IN ONE INCHLETTERS:

# RESTRICTED MATERIAL STORAGE CODE & NAME ONLY

MATERIAL IS (SUSPECT/EXPERIMENTAL) CARCINOGEN NOTIFY SUPERVISION IMMEDIATELY OF ANY LEAK OR SPILL

### - WORKS SUPPLY

SET UP AND MAINTAIN A SYSTEM TO SCREEN ORDERING OF RAW MATERIALS SO THAT ONLY THOSE RESTRICTED MATERIALS APPROVED FOR THE SITE ARE ORDERED. IT IS STANDARD POLICY AT TOLEDO THAT NO NEW RAW MATERIALS MAY BE ORDERED UNLESS APPROVED BY THE QUALITY CONTROL SUPERVISOR OR HIS DESIGNATED ALTERNATE. (SEE STD. PRACTICE 1-26).

- REPORT TO THE PRODUCTION SUPERINTENDENT AND TECHNICAL SUPERINTENDENT ANY ABNORMAL INCREASE IN USAGE OF

RESTRICTED MATERIALS.

# LOADING CLASSIFICATION (RISK CLASSIFICATION)

THIS IS ANOTHER FREQUENTLY MISUNDERSTOOD ITEM.

THE LOADING CLASSIFICATION HIGH OR LOW INDICATES HOW LIKELY IT IS THAT THERE COULD BE A FIRE OR EXPLOSION DURING LOADING A BATCH. IT DOES NOT TELL ANYTHING ELSE.

A FIRE OR EXPLOSION IS MOST LIKELY IF THE MATERIAL BEING LOADED IS LIKELY TO DEVELOP A STATIC SPARK AND THE MATERIAL ALREADY IN THE TANK IS EASY TO IGNITE (LOW FLASH POINT).

MATERIALS THAT ARE LIKELY TO DEVELOP A STATIC ELECTRICITY SPARK ARE THOSE THAT CANNOT CONDUCT ELECTRICITY WELL (SUCH AS H-49 AND DRY POWDER G-768 FOR EXAMPLE).

TOLEDO HAS ELECTED TO PREVENT FIRES AND EXPLOSIONS BY INERTING MIXERS WITH NITROGEN. IN THIS PROCESS ENOUGH NITROGEN IS ADDED THAT THE OXYGEN LEVELS FALLS BELOW 8%. WITH OXYGEN BELOW 8% THERE IS NOT ENOUGH OXYGEN TO SUPPORT FIRE OR EXPLOSIONS.

APPROVAL TO PURCHASE CHEMICALS (SEE STD. PRACTICE #1-26)

### RAW MATERIALS

THE PERSON RECOGNIZING THE NEED FOR ANY NEW RAW MATERIAL IS RESPONSIBLE FOR NOTIFYING THE HAZARDOUS MATERIALS COMMITTEE CHAIRMAN.

A "NEW" RAW MATERIAL IS DEFINED AS ANY RAW MATERIAL CODE THAT HAS NOT BEEN PURCHASED WITHIN THE LAST TWO YEARS.

THE HAZARDOUS MATERIAL COMMITTEE WILL APPROVE THE NEW RAW MATERIAL USING THE "NEW RAW MATERIAL APPROVAL FORM" COPIES ARE DISTRIBUTED TO APPROPRIATE PEOPLE ON THE TOLEDO PLANT.

# SUPPLY CHEMICALS

MOST SUPPLY CHEMICALS SUCH AS CLEANSERS, GREASES, OILS, ETC. ARE QUITE SAFE. HOWEVER, SOME OF THESE CHEMICALS COULD BE QUITE DANGEROUS. FOR THAT REASON SUPPLY CHEMICALS MUST BE APPROVED JUST AS RAW MATERIALS ARE. ANYONE WHO WANTS TO ORDER A NEW SUPPLY CHEMICAL SHOULD OBTAIN A "MATERIAL SAFETY SHEET" FROM THE SUPPLIER AND FORWARD IT TO THE HAZARDOUS MATERIALS COMMITTEE FOR APPROVAL. A LIST OF ALL SUPPLY CHEMICALS IS KEPT UP-DATED AND AVAILABLE.

IN GENERAL NO CHEMICALS EITHER RAW MATERIALS OR SUPPLIER SHOULD BE BROUGHT ONTO THE TOLEDO PLANT WITHOUT APPROVAL OF THE HAZARDOUS MATERIALS COMMITTEE.

THE FOLLOWING CHEMICALS ARE DRUG PRECURSORS. THAT IS THEY COULD BE USED TO MANUFACTURE DANGEROUS ILLEGAL DRUGS. FOR THAT REASON THEY MAY NOT BE PURCHASED UNLESS STEPS ARE TAKEN TO COMPLY TO "CORPORATE GUIDELINES FOR PERCURSOR DRUG SECURITY". CONTACT THE LEGAL DEPARTMENT FOR FURTHER INFORMATION.

# PRECURSOR DRUG LISTING (BY ABUSE POTENTIAL)

FOLLOWING IS THE LIST OF PRECURSOR DRUGS WHICH ARE SUBJECT TO THE CORPORATE GUIDELINES FOR PRECURSOR DRUG SECURITY:

- 1. MONOMETHYLAMINE
- 2. PHENYL ACETIC ACID
- 3. EPHEDRINE
- 4. PIPERIDINE
- 5. PHENYL MAGNESIUM BROMIDE
- 6. BROMOBENZENE
- 7. ORTHOTOLUIDINE
- 8. ANTHRANILLIC ACID
- 9. ERGOTAMINE TARTRATE
- 10. INDOLE
- 11. BENZYL CYANIDE (PHENYLACETONITRILE)

# 12. EPICHLOROHYDRINE

EFFECTIVE:

AUGUST, 1982

LIST COORDINATOR: T. J. MURPHY, JR. LEGAL DEPARTMENT M-10630 774-9553

### CHROMATE AND LEAD PIGMENTS

THIS PRACITCE COVERS REQUIRED PROTECTIVE PROCEDURES FOR THE SAFE STORAGE AND USE OF LEAD AND CHROMATE PIGMENTS AT THE TOLEDO PLANT. IT ALSO INCLUDES PROCEDURES FOR THE HANDLING OF INTERMEDIATES AND FINISHED PRODUCTS CONTAINING CHROMATE PIGMENTS DURING MANUFACTURE AND TESTING.

PIGMENTS INVOLVED - ALL YELLOW/ORANGE PIGMENTS CONTAINING
HEXAVALENT CHROMIUM AS CHROMATES OF LEAD, ZINC, AND
STRONTIUM ARE INCLUDED. CODES USED AT TOLEDO AS OF
6/1/79 ARE W-618, W-633, W-665, W-666, W-679, W-681,
W-686, W-698, W-622, W-692, W-652, W-636, AND W-609.
ALSO INCLUDED IS W-349 RED LEAD.

TOXICOLOGY - CHROMATE PIGMENTS ARE CLASSIFIED AS CARCINOGENS.

DU PONT LIMIT FOR CHROMATE IS TIGHTER, 0.05MG/M3 (AS CHROMATE) FOR AN EIGHT HOUR AVERAGE. THERE IS NO SHORT TERM EXPOSURE LIMIT.

OSHA LIMIT, (1010.1025) FOR LEAD IS 50 G/M3 FOR AN EIGHT HOUR AVERAGE. THERE IS NO SHORT TERM EXPOSURE LIMITS.

- LABELING LABELS READING "RESTRICTED MATERIAL FOLLOW SPECIAL INSTRUCTIONS" AND "MS-1" SHOULD BE ON EVERY CONTAINER WHERE ITIS PRACTICAL TO INSIST THAT THE SUPPLIER PRINT OR APPLY SUCH LABELS. IF THIS CANNOT BE DONE, LABELS SHOULD BE APPLIED LOCALLY IMMEDIATELY UPON RECEIPT. WITH PALLETIZED-BAGS OF PIGMENT, LABEL ALL BAGS ON THE BOTTOM ROW AND EVERY FOURTH ROW UPWARDS ON ALL FOUR SIDES OF THE PALLET.
- STORAGE SEGREGATED PIGMENT STORAGE. MATERIAL SPILLING FROM ANY TORN BAGS SHOULD BE CLEANED UP IMMEDIATELY WITH VACUUM CLEANER BY EMPLOYEES WEARING RESPIRATORS, GLOVES, AND TYVEK SUITS. THE BAGS SHOULD BE PATCHED WITH TAPE AND NON-RECOVERABLE PIGMENT PICKED UP TO PREVENT DUSTING AND/OR DISPOSED OF IN PLASTIC BAGS IN TRASH RECEPTACLES. RESIDUAL PIGMENT MUST BE VACUUMED UP. EMPLOYEES MUST VACUUM CLOTHING, SHOES, AND GLOVES WHEN DONE. SHOWERS ARE REQUIRED AT THE END OF THE DAY.
- EMERGENCY FIRST AID PROCEDURES IN CASE OF GENERATION OF LARGE QUANTITIES OF LEAD OR CHROMATE PIGMENT DUST NOT PROPERLY CONTROLLED BY VENTILATION AND EXHAUST EQUIPMENT, ALL EMPLOYEES IN THE IMMEDIATE VICINITY SHOULD BE REQUIRED TO WEAR PROPERLY APPROVED RESPIRATORS UNTIL THE DUST HAS BEEN REMOVED.

IN CASE AN EMPLOYEE SHOULD SUDDENLY INHALE EXCESSIVE

QUANTITIES OF LEAD OR CHROMATE PIGMENT DUST DIRECTLY INTO HIS LUNGS, HE SHOULD BE REMOVED FROM THE AREA IMMEDIATELY AND ANY PIGMENTS SHOULD BE FLUSHED FROM HIS EYES AND SKIN WITH COPIOUS QUANTITIES OF WATER. A PHYSICIAN SHOULD BE CALLED TO EXAMINE HIM.

- WASTE DISPOSAL CONTAMINATED PIGMENT OR PAPER BAGS WITH

  RESIDUAL DUST IN THEM SHOULD BE DISPOSED OF IN SUCH A WAY

  THAT NEITHER COMPANY EMPLOYEES NOR WASTE CONTRACTOR'S

  EMPLOYEES ARE EXPOSED TO DUST. THE BAGS ARE ROLLED UP AND

  PLACED IN SEGREGATED FIBER DRUMS WHICH ARE THEN

  LANDFILLED. RESPIRATORS MUST BE WORN BY EMPLOYEES

  HANDLING BAGS.
- PERSONAL PROTECTIVE EQUIPMENT AND CLEANING EMPLOYEE EXPOSURE MUST BE CONTROLLED BY ENGINEERING METHODS AND ADMINISTRATIVE CONTROLS. IN ADDITION, THESE PIGMENTS ARE MS-1 CODED AND REQUIRE THE WEARING OF RESPIRATORS, LEATHER GLOVES, AND TYVEK SUITS WHENEVER OPEN PIGMENTS ARE BEING HANDLED. RESPIRATORS MUST BE NIOSH/MESA APPROVED. BOTH TYVEK AND GLOVES ARE DISPOSED OF IN FIBER AFTER EMPLOYEE IS DONE LOADING, LOADING AREA, AND LOADER'S CLOTHES MUST BE VACUUMED. SHOWERS MUST BE TAKEN, INCLUDING WASHING OF HAIR IF HAIR COVERING IS NOT PROVIDED, BEFORE GOING HOME AFTER LOADING LEAD AND CHROMATE PIGMENTS. SHOES WORN DURING LOADING OF LEAD OR CHROMATE PIGMENTS, SHOULD NOT BE WORN OFF THE PLANT. EACH EMPLOYEE WILL USE THEIR OWN SPECIAL GLOVES FOR THE SOLE PURPOSE OF HANDLING CHROMATES. THESE GLOVES ARE STORED IN STORAGE CABINET IN THE AREA.
- MONITORING FOLLOWING FEDERAL GUIDELINES AND COMPANY POLICY A MONITORY PROGRAM WILL BE ADMINISTERED BY THE PLANT SAFETY ENGINEER.
- INTERMEDIATES IN THE INTERMEDIATE, THESE PIGMENTS ARE
  DISPERSED AND EXPOSURE IS MINIMAL; THEREFORE, NO SPECIAL
  PRECAUTIONS ARE REQUIRED IN THE HANDLING OF MILLBASES
  CONTAINING LEAD OR CHROMATE PIGMENTS EXCEPT FOR REQUIRED
  S-CODE PROTECTION. IF THEY ARE LET DOWN AND SPRAYED IN
  THE LABORATORY, THE SAME RESPIRATOR PROTECTION IS
  REQUIRED AS ABOVE ("SPECIAL PROCEDURES LABORATORY SPRAY
  ROOMS").
- FINISHED PRODUCTS NO SPECIAL LABELS OR SPECIAL HANDLING
  PROCEDURES ARE REQUIRED FOR PACKAGED FINISHED PRODUCTS
  CONTAINING LEAD OR CHROMATE PIGMENTS.

### SPECIAL RECORDS -

BATCH CARDS - IT IS NOT NECESSARY TO FLAG OR SPECIALLY MARK CARDS CALLING FOR LEAD OR CHROMATES NOR TO RETAIN THEM BEYOND THE NORMAL SCHEDULE.

MEDICAL RECORDS - SEE LETTER OF JANUARY 23, 1976, BY BRUCE W. KARRH, M.D., TO ALL COMPANY PHYSICIANS RE: RETENTION OF MEDICAL RECORDS. LETTER IS ON FILE IN MEDICAL.

A LATERAL CHEST EX-RAY IS TAKEN AND RECORDED AT EACH PHYSICAL FOR PEOPLE WHO COME INTO CONTACT WITH LEAD AND CHROMATES.

ANY EMPLOYEE WITH LEAD EXPOSURE AT, OR ABOVE 30 G/M3 FOR 30 DAYS PER YEAR WILL RECEIVE A BLOODLEAD TEST EVERY SIX MONTHS. OTHER EMPLOYEES WILL RECEIVE THIS TEST AS PART OF THEIR ANNUAL PHYSICAL.

### RECEIVING DEPARTMENT RESPONSIBILITIES

MAKE SURE ALL ITEMS RECEIVED CARRY THE CORRECT, LEGIBLE, PERMANENT S-CODE DESIGNATION. STENCIL IT ON IF MISSING.

SAMPLE MATERIALS TO THE CONTROL LABORATORY PER THE LIST PROVIDED.

PUMP TANKWAGONS TO STORAGE ONLY IF APPROVED BY THE CONTROL LAB.

STORE MATERIALS SAFELY IN COMPLIANCE WITH:

STENCIL DATE ON MATERIALS THAT HAVE LIMITED SHELF LIFE: SUCH MATERIALS ARE INDICATED ON THE "GENERAL RAW MATERIAL INFORMATION" LIST IF NOT ALREADY INDICATED ON CONTAINERS.

# PURCHASING DEPARTMENT RESPONSIBILITIES

ORDER CHEMICALS ONLY IF APPROVED BY THE HAZARDOUS MATERIALS COMMITTEE AND ORDERED WITHIN THE LAST TWO YEARS.

### TSCA (TOXIC SUBSTANCES CONTROL ACT)

THE TOXIC SUBSTANCES CONTROL ACT OF 1976 PROHIBITS THE COMMERCIAL USE OF NEW CHEMICALS UNTIL THEY ARE APPROVED BY THE EPA AND ADDED TO THEIR APPROVED LIST.

WE MAY USE UNAPPROVED CHEMICALS FOR EXPERIMENTAL PURPOSES TO MAKE ALIGNMENT BATCHES BUT WE MUST NOT SELL THESE UNAPPROVED CHEMICALS OR PRODUCTS CONTAINING THEM UNTIL APPROVED BY THE EPA. FAILURE TO FOLLOW THE LAW IS DEALT WITH SEVERELY. THE REST OF THIS SECTION DESCRIBES THE METHODS WE USE TO COMPLY WITH THIS LAW.

SUPPLY CHEMICALS ARE SUBJECT TO THIS RESTRICTION AS WELL AS RAW MATERIALS.

### GENERAL

TSCA WAS ENACTED INTO LAW BY THE U. S. CONGRESS IN LATE FALL 1976. TSCA GIVES THE ENVIRONMENTAL PROTECTION AGENCY (EPA) A BROAD MANDATE TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT FROM UNREASONABLE CHEMICAL RISK. TO ACCOMPLISH THIS PRIMARY OBJECTIVE, THE EPA WAS EMPOWERED TO GATHER INFORMATION ON CHEMICALS; TO IDENTIFY HARMFUL SUBSTANCES; AND TO CONTROL THOSE SUBSTANCES WHOSE RISKS OUTWEIGH THEIR BENEFITS TO SOCIETY AND THE ECONOMY.

THE TOXIC SUBSTANCES CONTROL LACT (TSCA) HAS SIGNIFICANTLY CHANGED THE REGULATORY ENVIRONMENT.

LACK OF UNDERSTANDING OR INADVERTENT VIOLATIONS OF THE ACT CAN LEAD TO COMMERCIALIZATION DELAYS, CORPORATE EMBARRASSMENT AND/OR POTENTIALLY SEVERE FINES.

THE PURPOSE OF THIS PRACTICE IS TO ACQUAINT ALL PERSONNEL WITH THE ACT'S REQUIREMENTS AND OUR CONTROLS TO PREVENT INADVERTENT VIOLATIONS.

### RECEIPT OF RAW MATERIALS

1. RAW MATERIALS MAY BE RECEIVED BY THIS PLANT THAT DO NOT HAVE TSCA APPROVAL. THE PROPER LABELING AND PLACING IN QUARANTINE OF THESE MATERIALS IS ESSENTIAL.

ALL INCOMING RAW MATERIALS SHOULD BE LABELED AND REFERENCE TO SPECIFICATION SHEET SHOULD REVEAL THAT THE MATERIAL IS NOT TSCA APPROVED. A BACK-UP TO THE SPECIFICATION SHEET IS THE COMPUTER PRINT-OUT CALLED "THE TOLEDO PLANT RAW MATERIAL SAMPLING LIST." THIS LIST WHICH IS UPDATED REGULARLY IS ARRANGED BY CODES. IF A MATERIAL IS NOT TSCA APPROVED, IT WILL HAVE OPPOSITE THE CODE THE FOLLOWING STATEMENT, "NEEDS TOSCA STENCIL". WHEN THIS NOTATION IS PRESENT, ALL CONTAINERS

OF THIS CODE SHALL BE STENCILLED AS FOLLOWS:

R AND D MATERIAL

EXP. USE ONLY

2. UPON RECEIPT OF MATERIALS THAT ARE NOT APPROVED BY TSCA, THE QUALITY CONTROL LABORATORY IS TO BE NOTIFIED AT ONCE. THE QUALITY CONTROL LABORATORY IS TO ISSUE A QUARANTINE ON THE MATERIAL STATING THAT IT IS NON-TSCA APPROVED.

# HANDLING OF INTERMEDIATES

FORMULAS FOR INTERMEDIATES CONTAINING NON-TSCA APPROVED MATERIALS ARE TO CARRY THE FOLLOWING SPECIAL NOTATION THAT MUST BE STENCILED ON ALL DRUMS:

R AND D MATERIAL

ILLEGAL FOR COMMERCIAL USE.

DRUMS BEARING SUCH A NOTATION SHALL NOT BE REUSED FOR ANY PURPOSE WITHOUT DIRECT PERMISSION OF THE TECHNICAL SUPERINTENDENT.

### HANDLING OF FINISHED PRODUCT

ALL NON-TSCA FINISHED PRODUCT FORMULAS SHALL CARRY THE FOLLOWING NOTATION:

HOLD IN QUARANTINE; FOR RELEASE BY THE

TECHNICAL SUPERINTENDENT OR PLANT MANAGER

INSTRUCTIONS TO STENCIL THIS NOTATION ON ALL NON-TSCA APPROVED FINISHED PRODUCTS SHALL APPEAR ON THE BATCH CARD AND THE REOUISITION.

THE INSTRUCTION ON THE BATCH CARD WILL NOTIFY THE QUALITY CONTROL LABORATORY TO PLACE A QUARANTINE ON THIS MATERIAL AS SOON AS IT IS APPROVED TO FILL.

### RELEASE TO SHIP

NON-TSCA APPROVED FINISHED PRODUCT CANNOT BE SENT TO A CUSTOMER UNDER TERMS OF COMMERCIAL SALE AND USE. THESE PRODUCTS CAN BE SHIPPED, WITH PROPER APPROVAL, TO A CUSTOMER FOR TRIAL AND/OR EXPERIMENTAL USE.

RELEASE OF THESE PRODUCTS SHALL BE MADE ONLY BY THE TECHNICAL SUPERINTENDENT OR THE PLANT MANAGER. THESE PERSONNEL SHALL SIGN THE SHIPPING PAPERS RELEASING AS "OK TO SHIP" ONLY THE QUANTITY ON AN INDIVIDUAL SHIPMENT. THE REMAINDER OF THE MATERIAL REMAINS QUARANTINED.

# PENALTIES UNDER THE ACT

### CIVIL AND CRIMINAL PENALTIES:

ANY PERSON WHO FAILS OR REFUSES TO COMPLY WITH ANY REQUIREMENT MADE UNDER THE LAW MAY BE FINED UP TO \$25,000 FOR EACH DAY OF VIOLATIONS. THESE FINES MAY BE ASSESSED FOR A PERIOD OF UP TO 90 DAYS PRIOR TO THE DATE OF MANUFACTURE. PERSONS WHO KNOWLINGLY OR WILLFULLY VIOLATE THE LAW MAY BE FINED UP TO \$25,000 FOR EACH DAY OF VIOLATION, IMPRISONED UP TO ONE YEAR, OR BOTH - IN ADDITION TO ANY CIVIL PENALTIES.

### STORAGE OF HAZARDOUS MATERIALS

SOME MATERIALS MUST BE STORED UNDER SPECIAL CONDITIONS (TEMPERATURE, SUN, DRY AWAY FROM CERTAIN CHEMICALS AND/OR IN SPECIAL AREAS TO MINIMIZE HAZARDS.

SUCH SPECIAL STORAGE REQUIREMENTS ARE GENERALLY NOTED ON THE "SPECIFICATION SHEETS" ON SUPPLIERS MATERIAL SAFETY DATA SHEET.

AT TOLEDO THIS INFORMATION IS PART OF THE "GENERAL RAW MATERIAL INFORMATION" COMPUTER LIST THAT IS PART OF THIS PROCEDURE.

### REASON FOR STORAGE IN SPECIFIC LOCATIONS

## COTTON SHED BUILDING #44, HAZARDOUS MATERIALS BUILDING

THIS BUILDING IS FOR MATERIALS THAT MUST BE PROTECTED FROM FREEZING, PROTECTED FROM TEMPERATURE EXTREMES, OR KEPT OUT OF DIRECT SUNLIGHT. IT IS NOT FOR ALL HIGH S-CODE MATERIAL.

### NFPA DESIGNATION

THIS THREE NUMBER DESIGNATION IS USED TO ALERT FIREFIGHTERS OF THE POTENTIAL HAZARDS TO BE EXPECTED IN FIGHTING FIRES. EACH STORAGE TANK OR MAJOR BUILDING IS CODED IN LARGE BLOCK NUMBERS WITH THE NFPA CODE.

### MCA (MANUFACTURING CHEMISTS ASSOCIATION)

THE MANUFACTURING CHEMISTS ASSOCIATION DEVELOPED A CLASSIFICATION SYSTEM THAT WE DO NOT ROUTINELY USE.

HOWEVER, IT IS INCLUDED HERE FOR REFERENCE IN CASE IT IS NEEDED. TEN CLASSIFICATIONS DESIGNATED BY ROMAN NUMERALS ARE USED. A CHEMICAL MAY FALL INTO MORE THAN ONE CLASS.

THE MCA CLASSIFICATION IS SHOWN IN THE SPEC. SHEET JUST AFTER THE S-CODE.

SOME LABORATORIES USE THE MCA CLASSIFICATION. TOLEDO USES THE S-CODE.

### TABLE NO. 1

### HAZARD CLASSIFICATIONS

# MANUFACTURING CHEMISTS ASSOCIATION

PRODUCTS WILL BE ENCOUNTERED THAT PRESENT HAZARDS VARYING IN KIND OR DEGREE FROM THOSE LISTED. APPROPRIATE CLASS OF HAZARD, TYPE OF HAZARD, AND PRECAUTION NOTICE ARE LISTED AS A GUIDE PRIMARILY FOR SHOWING FORMULA AND BATCH CARD NOTATIONS.

"CLASS OF HAZARD"

Ι

# TYPE OF HAZARD

A) FLASH POINT 20 DEG F OR BELOW

### PRECAUTION NOTICE

KEEP AWAY FROM HEAT AND OPEN FLAME. USE ADEQUATE VENTILATION. KEEP CONTAINER TIGHTLY CLOSED.

### **STORAGE**

STORE IN CLOSED CONTAINER AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

"CLASS OF HAZARD"

Ι

TYPE OF HAZARD

B) FLASH POINT 20 DEG F TO 80 DEG F, INCLUSIVE.

PRECAUTION NOTICE

KEEP AWAY FROM HEAT AND OPEN FLAME. USE ADEQUATE VENTILATION. KEEP CONTAINER CLOSED WHEN NOT IN USE.

STORAGE

STORE IN CLOSED CONTAINER AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

"CLASS OF HAZARD"

Ι

TYPE OF HAZARD

C) FLASH POINT 80 DEG F TO 150 DEG F, INCLUSIVE.

PRECAUTION NOTICE

KEEP AWAY FROM HEAT AND OPEN FLAME. KEEP CONTAINER CLOSED WHEN NOT IN USE.

STORAGE

STORE IN CLOSED CONTAINER AWAY FROM HEAT, SPARKS, AND OPEN FLAME.

"CLASS OF HAZARD"

ΙI

TYPE OF HAZARD

OXIDIZING AGENTS

PRECAUTION NOTCE

WEAR RUBBER GLOVES, RUBBER APRON, AND ACID TYPE GOGGLES. AVOID INHALATION OF FUMES.

**STORAGE** 

AVOID CONTACT WITH OTHER RAW MATERIALS, SINCE THEY MAY REACT EXPLOSIVELY. STORE IN CLOSED CONTAINER.

"CLASS OF HAZARD"

III

TYPE OF HAZARD

### NOTES

(1) MATERIALS GIVING VAPORS RAPIDLY TOXIC OR EXTREMELY IRRITATING ON EXPOSURE FOR A SHORT TIME OR TO LOW CONCENTRATIONS.

PRECAUTION NOTICE

WHEN VAPORS ARE PRESENT, WEAR A SELF-CONTAINED AIR LINE MASK OR PROVIDE ADEQUATE VENTILATION, WITH FACE SHIELD PLUS SYNTHETIC GLOVES AND SYNTHETIC APRON.

**STORAGE** 

STORE IN A TIGHTLY CLOSED CONTAINER.

IV

TYPE OF HAZARD

MATERIALS GIVING VAPORS HAZARDOUS FROM PROLONGED OR REPEATED

EXPOSURE TO HIGH CONCENTRATIONS.

PRECAUTION NOTICE

USE IN WELL VENTILATED AREA. AVOID PROLONGED OR REPEATED EXPOSURE TO VAPORS.

STORAGE

STORE IN CLOSED CONTAINER.

CLASS OF HAZARD

V

TYPE OF HAZARD

GASES AND VAPORS PHYSIOLOGICALLY INERT.

PRECAUTION NOTICE

USE IN WELL VENTILATED AREA. KEEP CONTAINER TIGHTLY CLOSED. IN CASE OF HIGH CONCENTRATION, WEAR A SELF-CONTAINED AIR LINE MASK.

### **STORAGE**

STORE IN TIGHTLY CLOSED CONTAINER IN WELL VENTILATED AREA.

# CLASS OF HAZARD

VI

# TYPE OF HAZARD

### NOTES

- (3) MATERIALS IN DUST FORM.
- (4) HAZARDOUS FROM INHALATION OR CONTACT.

### PRECAUTION NOTICE

WEAR LEATHER GLOVES, LONG-SLEEVED SHIRT, AND CARTRIDGE TYPE FILTER RESPIRATOR. WASH WITH SOAP AND WATER AFTER HANDLING.

## **STORAGE**

STORE IN CLOSED CONTAINER.

### CLASS OF HAZARD

### NOTES

VII

(1) CORROSIVE SKIN IRRITANT.

(2)

### PRECAUTION NOTICE

WEAR SYNTHETIC GLOVES, SYNTHETIC APRON, AND PLASTIC FACE SHIELD AND GOGGLES. IN CASE OF CONTACT, IMMEDIATELY FLUSH SKIN OR EYES WITH PLENTY OF WATER; FOR EYES, GET MEDICAL ATTENTION AT ONCE.

### **STORAGE**

STORE IN CLOSED CONTAINER.

### CLASS OF HAZARD

VIII

### TYPE OF HAZARD

MATERIALS CAUSING SKIN IRRITATION AFTER PROLONGED OR REPEATED CONTACT.

### PRECAUTION NOTICE

AVOID SKIN CONTACT. WASH WITH SOAP AND WATER AFTER HANDLING.

### STORAGE

STORE IN CLOSED CONTAINER.

# CLASS OF HAZARD

IX

# TYPE OF HAZARD

# NOTE

(3) MATERIAL TOXIC THROUGH SKIN ABSORPTION.

# PRECAUTION NOTICE

WEAR SYNTHETIC GLOVES, SYNTHETIC APRON, AND PLASTIC FACE SHIELD. IN CASE OF CONTACT, IMMEDIATELY REMOVE ALL CONTAMINATED CLOTHING AND FLUSH SKIN OR EYES WITH PLANTY OF WATER; FOR EYES, GET MEDICAL ATTENTION. WASH CLOTHING BEFORE RE-USE.

### **STORAGE**

STORE IN CLOSED CONTAINER.

CLASS OF HAZARD

X

# PRECAUTION NOTICE

DO NOT TAKE INTERNALLY. AVOID BREATHING DUST OR VAPORS. WASH WELL WITH SOAP AND WATER AFTER HANDLING.

### **STORAGE**

STORE IN CLOSED CONTAINER.

### CHEMICAL DESCRIPTION

THE CHEMICAL DESCRIPTION OF AN ITEM CAN BE CONFUSING, ESPECIALLY TO THOSE WITH NO KNOWLEDGE OF CHEMISTRY. ON THE PLANT COMPUTER LIST OF RAW MATERIALS WE SHOW THE GENERAL CHEMICAL CLASS FOLLOWED BY THE CHEMICAL NAME. ANYTHING IN PARENTHESIS IS THE SUPPLIERS CODE FOR THE MATERIAL. THE CONFUSION CAN ARISE WHEN MORE THAN ONE SUPPLIER IS INVOLVED AND THEY USE DIFFERENT CHEMICAL DESCRIPTION FOR THE SAME MATERIAL. FOR EXAMPLE:

### SHIPPING CLASSIFICATION

SAFE SHIPPING MINIMIZES HAZARDS TO TRUCKERS, WAREHOUSEMEN, THE DRIVING PUBLIC AND THE RECEIVER. IMPROPER SHIPMENT OF MATERIALS HAVE CAUSED DISASTROUS FIRES, EXPLOSIONS, ETC.. BECAUSE OF THIS, LAWS ARE STRICT.

THE D.O.T. (DEPARTMENT OF TRANSPORTATION OF HAZARDOUS MATERIALS COMMITTEE OVERSEES OUR COMPLIANCE WITH THESE LAWS. DU PONT PUBLISHES A SHIPPING CLASSIFICATION MANUAL THAT CONTAINS ESSENTIAL INFORMATION.

GENERALLY THE SERVICE AREA SUPERVISOR IS CHAIRMAN OF THE TRANSPORTATION OF HAZARDOUS MATERIALS COMMITTEE AND THE LOCAL EXPERT ON THESE MATTERS.

SHIPPING CLASSIFICATION INFORMATION IS ALSO SHOWN ON THE "RAW MATERIAL SPECIFICATION SHEET".

# STATIC ELECTRICITY & FLASH POINT

THE FLASH POINT IS THE TEMPERATURE OF WHICH A SOLVENT WILL IGNITE WHEN SUBJECTED TO A SPARK OR FLAME. A LOW FLASH POINT TEMPERATURE AT OR NEAR ROOM TEMPERATURE INDICATES A VERY FLAMMABLE MATERIAL THAT MUST BE HANDLED WITH CARE TO AVOID FIRE.

MATERIALS WITH LOW FLASH POINTS EVAPORATE EASILY AND MIX WITH AIR TO FORM A FLAMMABLE OR EXPLOSIVE MIXTURE.

HOT SOLVENTS ARE THEREFORE MORE LIKELY TO CATCH FIRE THAN COLD SOLVENTS.

WHEN LIQUIDS OR POWDERS ARE POURED OR FLOW STATIC-ELECTRICITY IS GENERATED THAT CAN CAUSE A SPARK. THIS SPARK CAN CAUSE SERIOUS FIRE OR EXPLOSION. GROUNDING MINIMIZES THE CHANCES OF SPARKS FORMING. INERTING MIXERS ENSURES THAT EVEN IF A SPARK FORMS, NOT ENOUGH OXYGEN IS PRESENT TO SUPPORT FIRE OR EXPLOSION.

FIRE

FIRE IS A VERY FAST CHEMICAL REACTION BETWEEN FUEL AND OXYGEN.

FIRE REQUIRES THREE FACTORS TO EXIST; COMMONLY CALLED THE FIRE TRIANGLE.

FLAME
STATIC SPARK
SUNLIGHT
STEAM
HEAT
CHEMICAL
REACTION

AIR

OXYGEN TANKS

SOLVENT RESIN

ALL THREE LEGS OF THE TRIANGLE MUST BE PRESENT TO HAVE FIRE. AT TOLEDO WE TAKE PRECAUTIONS TO PRESENT ALL THREE FROM COMING TOGETHER AS FOLLOWS.

### ENERGY LEG CONTROL

BAN MATCHES, LIGHTERS STATIC GROUNDING SPRINKLER SYSTEM

FUEL LEG CONTROL

COVERED CONTAINERS, TANKS WIPER CONTROL TRASH CONTROL HOUSEKEEPING

# OXYGEN LEG CONTROL

MIXER INERTING

SPONTANEOUS COMBUSTION

SOME CHEMICALS (USUALLY OILS) ARE ALWAYS REACTING SLOWLY WITH OXYGEN, THIS IS HOW THEY DRY TO MAKE A HARD PAINT FILM. IF THIS REACTION WITH OXYGEN GETS GOING TOO FAST FIRE RESULTS SINCE FIRE IS JUST A VERY FAST REACTION WITH OXYGEN. THIS PROCESS OF SETTING ITSELF ON FIRE IS CALLED SPONTANEOUS COMBUSTION.

TWO FACTORS CONTRIBUTE TO SPONTANEOUS COMBUSTION.

OXYGEN AVAILABILITY - ANYTHING THAT HELPS THE OXYGEN GET TO THE FUEL SPEEDS UP SPONTANEOUS COMBUSTION. SUCH THINGS TO AVOID ARE:

- MATERIALS SPREAD OUT ON RAGS, CLOTHES EXCELSIOR OR OTHER MATERIALS THAT HELP AIR SURROUND THE FUEL.
  - CHEMICALS THAT CONTAIN OXYGEN; THESE ARE KNOWN AS STRONG OXIDIZERS (SEE ALSO OXIDIZERS).
- HEAT ANYTHING THAT ADDS OR RETAINS HEAT WILL SPEED UP; SPONTANEOUS COMBUSTION. SUCH AS:
  - OILY RAGS ON STEAM PIPES, IN THE SUNLIGHT, HOTPLATES, ENGINES, HEATERS, ETC..
- PILES OF OILY RAGS & TRASH TEND TO RETAIN HEAT INSIDE THE PILE YET ARE LOOSE ENOUGH TO LET OXYGEN IN.

# OXIDIZERS, OXIDIZING AGENTS

FIRE IS A FAST REACTION OF FUEL AND OXYGEN. USUALLY THE OXYGEN COME FROM THE AIR. HOWEVER, SOME CHEMICALS ALSO CONTAIN OXYGEN. IF THESE ARE ACCIDENTALLY MIXED WITH SOME FUELS A FIRE MAY RESULT.

OXIDIZERS MUST BE STORED AWAY FROM THINGS THAT COULD BE FUEL FOR THE FIRE.

STRONG OXIDIZERS ARE INDICATED IN THE "GENERAL RAW MATERIAL" LIST.

PEROXIDES USED TO INITIATE ACRYLIC RESIN REACTIONS ARE OUR STRONGEST OXIDIZERS.

FIRE FIGHTING METHODS

# **EXPLOSION HAZARDS**

AN EXPLOSION IS A FIRE THAT HAPPENS SO FAST ALL AT ONCE THAT THE BURST OF ENERGY DESTROYS BOTH BY HEAT AND THE SHOCK WAVE.

FOR AN EXPLOSION THE CONDITIONS OF THE FIRE TRIANGE MUST BE MET PLUS THERE MUST BE THE CORRECT MIXTURE OF FUEL AND AIR. A GOOD EXAMPLE IS GASOLINE IN YOUR CAR ENGINE. UNLESS THERE IS THE CORRECT MIXTURE OF FUEL AND AIR THERE IS NO EXPLOSION IN THE CYLINDERS. TOO MUCH FUEL (FLOODED) AND IT WON'T RUN.

ENGINEERING CAN TEST THE FUEL/AIR MIXTURE IN TANKS OR OTHER PLACES WHERE AN UNSAFE EXPLOSIVE MIXTURE IS SUSPECTED USING A "SNIFF TESTER". THIS IS DONE PRIOR TO WELDING, ETC..

# MONOMERS

MONOMERS ARE CHEMICALS THAT CAN BE HAZARDOUS BECAUSE OF TOXICITY AND BECAUSE THEY CAN EASILY REACT VIOLENTLY TO FORM POLYMERS (RESINS). IN THE MANUFACTURE OF RESINS WE CONTROL THIS POTENTIALLY VIOLENT REACTION AND CAN "KILL" IT WITH SPECIAL KILL SOLUTIONS.

IT IS POSSIBLE THAT IN A DRUM OR STORAGE TANK THE MONOMER COULD START POLYMERIZING BY ITSELF. THIS CAN HAPPEN IF THE MATERIAL GETS TOO HOT OR IF THE INHIBITOR CONTENT GETS TOO LOW.

INHIBITORS ARE SPECIAL CHEMICALS ADDED TO THE MONOMER TO PREVENT IT FROM POLYMERIZING DURING STORAGE. THE INHIBITOR FINDS AND DESTROYS CERTAIN CHEMICALS (INITIATORS) THAT CAN START POLYMERIZATION DURING STORAGE. IN THE PROCESS THE INHIBITOR ITSELF IS DESTROYED. THEREFORE OLD MONOMER HAS LESS INHIBITOR THAN FRESH MONOMER.

### INITIATOR STORAGE ALARMS AND CAPACITY LIMITS

### INTRODUCTION

A 12-INCH CONCRETE BLOCK-TYPE BUILDING NORTH AND WEST OF THE SERVICE GARAGE IS USED TO STORE ALL INITIATORS CONSUMED ON THE TOLEDO PLANT SITE. CURRENTLY THERE ARE ONLY FOUR TYPES: H-118, H-377, H-545, H-640. EACH OF THESE CODES HAVE THEIR OWN DESIGNATED FLOOR SPACE. A VACANT AREA IS DESIGNATED FOR ANY ADDITIONAL; INITIATORS THAT MAY BE USED IN FUTURE PRODUCTION. THE BUILDING IS EQUIPPED WITH AN EMERGENCY FLOOR DRAIN AND THE FLOOR IS PITCHED ACCORDINGLY. A LIGHTED CONCRETE DRIVE 10 FEET WIDE IS ITS ONLY ACCESS BY TRUCK.

### FIRE PROTECTION

THE BUILDING IS EQUIPPED WITH A MANUAL DELUGE TYPE SPRINKLER SYSTEM TO BE USED IN EMERGENCY COOLING IF IT WERE EVER NEEDED. THE CONTROL IS LOCATED ON THE WEST EXTERIOR WALL.

### TEMPERATURE PROTECTION

BECAUSE TEMPERATURE EXTREMES ARE CRITICAL THE BUILDING IS EQUIPPED WITH COOLING AND HEATING UNITS, EACH HAS A BACK-UP UNIT WORKING INDEPENDENTLY IF NEEDED. TEMPERATURE RANGE IS 54 DEG F TO 65 DEG F. ALTHOUGH OVERHEATING IS THE MAIN CONCERN, THE RISK OF FROZEN PEROXIDE IS NOT ACCEPTABLE.

### ALARM PROTECTION

HIGH AND LOW TEMPERATURE ARE MONITORED BY A PANEL ALARM LOCATED IN OUR MAIN GATEHOUSE. A SIGNAL IS TRANSMITTED TO THE GATEHOUSE IN THE EVENT THE TEMPERATURE GOES BELOW 50 DEG F OR ABOVE 65 DEG F.

THE WATCHMAN THEN RESPONDS IN THE FOLLOWING MANNER.

### A.D.T. PROTECTION

- WHEN THE DAY SHIFT IS WORKING. NOTIFY THE SERVICE AREA SUPERVISOR WHO WILL INITIATE ACTION PRESCRIBED BELOW.
- 2. NIGHTS WHEN THE PLANT IS WORKING. NOTIFY THE SHIFT SUPERVISOR WHO WILL INITIATE ACTION PRESCRIBED BELOW.
- 3. WEEKENDS AND HOLIDAYS WHEN THE PLANT IS CLOSED. THE WATCHMAN WILL INITIATE THE ACTION PRESCRIBED BELOW.

### ACTION TO BE TAKEN

- 1. CHECK TO SEE THAT INITIATOR BLDG. DOORS ARE CLOSED.
- 2. TEMPERATURE BELOW 50 DEG F OR ABOVE 65 DEG F -- NOTIFY MECHANICAL AREA SUPERVISOR OR HIS DESIGNATE IMMEDIATELY.
- 3. IF TEMPERATURES GOES ABOVE 75 DEG F NOTIFY SERVICE AREA SUPERVISOR OR HIS DESIGNATE -- LOOK INTO RENTING A REFRIGERATED TRAILER FOR TEMPORARY STORAGE IF COOLING UNITS CANNOT BE REPAIRED.
- 4. TEMPERATURE AT 90 DEG F CALLS FOR IMMEDIATE ACTION TO CONNECT FIRE HOSE TO MANUAL DELUGE SYSTEM LOCATED ON OUTSIDE WEST WALL OF INITIATOR BLDG. AND OPEN THE VALVES.

# INITIATOR BUILDING CAPACITY LIMITS

### FACTORY MUTUAL CLASSIFICATION

- CLASS I HAZARD CLASSIFICATION PRESENTS A DETONATION HAZARD,
  WHICH IS A RAPID EXPLOSIVE DECOMPOSITION. CURRENTLY
  WE HAVE NO CLASS I INITIATORS ON THE PLANT.
- CLASS II HAZARD CLASSIFICATION PRESENTS A DEFLAGRATION HAZARD, THAT IS, AN EXPLOSIVE DECOMPOSITION NOT AS RAPID, VIOLENT, OR COMPLETE AS CLASS I. CLASS II MATERIAL CURRENTLY STORED ON THE PLANT IS H-377.
- CLASS III HAZARD CLASSIFICATION PRESENTS A MODERATE EXPLOSIVE HAZARD AND SEVERE FIRE HAZARD. CLASS III MATERIALS CURRENTLY STORED ON THE PLANT ARE H-118, H-545, H-640.
- WHERE CLASS I, II, AND III PEROXIDES ARE STORED TOGETHER, THE SUM OF THE AMOUNT OF CLASS I PLUS 1/10 OF THE AMOUNT OF CLASS II, PLUS 1/100 OF THE AMOUNT OF CLASS III SHOULD NOT EXCEED THE MAXIMUM ALLOWABLE AMOUNT FOR THE MOST HAZARDOUS CLASS PRESENT.

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SECTION 17

### STANDARD PRACTICE IV-20

PLANT: TOLEDO GENERAL

AREA: ALL

DATE :11-9-83 S.D.: NEW

WRITTEN BY:

D. B. WILCOX

APPROVED BY:

H. J. LEARMAN

SUBJECT: W-349 RED LEAD PIGMENT

### I. INTRODUCTION:

THE PURPOSE OF THIS STANDARD PRACTICE IS TO ESTABLISH A PROCEDURE FOR THE HANDLING AND STORAGE OF W-349 RED LEAD PIGMENT USED IN THE MANUFACTURING OF MAINTENANCE FINISHES.

### II. OUTLINE:

- A. STORAGE
- B. WHERE USED
- C. BATCH RECOGNITION FOR W-349
- D. PERSONAL PROTECTIVE EQUIPMENT
- E. LOADING BATCH
- F. MIXER AGITATION
- G. REACTIVITY
- H. TIME LIMIT FOR MATERIAL IN MIXER

#### A. STORAGE

ALL W-349 MS-1 RED LEAD PIGMENT WILL BE KEPT IN THE SEGREGATED CHROMATE AND LEAD PIGMENT STORAGE AREA ON GRINDING FLOOR OR 1B BASEMENT. MIXING FLOOR FIRST LINE SUPERVISOR WILL KEEP AN AMPLE SUPPLY OF MATERIAL IN THIS AREA. MATERIAL WILL BE TAKEN AS NEEDED FOR LOADING OF BATCHES TO MIXING FLOOR BY MIXER OPERATOR.

### B. WHERE USED

W-349 MS-1 RED LEAD PIGMENT WILL BE USED IN VARIOUS MAINTENANCE FINISHES BATCHES AND IS LOADED DIRECTLY TO MIXING FLOOR TANKS.

### C. BATCH CARD RECOGNITION FOR W-349

A RED LABEL STICKER READING "CAUTION RED LEAD MATERIAL DO NOT OVER AGITATE", WILL BE ATTACHED TO THE TOP OF THE

BATCH CARD BY THE MIXING FLOOR FIRST LINE SUPERVISOR AT THE TIME OF MARSHALLING THE MATERIAL FOR THE BATCH.

### D. PERSONAL PROTECTIVE EQUIPMENT

EQUIPMENT TO BE WORN BY OPERATOR WHEN LOADING W-349 MS-1 RED LEAD PIGMENT INTO MIXER. OPERATOR MUST WEAR A TYVEK SUIT COVERING ARMS, LEGS, AND TORSO, SHOE COVERS, RESPIRATOR WITH DUST FILTERS' AND LEATHER GLOVES.

#### E. LOADING RED LEAD INTO BATCH

OPERATOR WILL NEED A LOADING CHUTE WHICH IS LOCATED IN A DESIGNATED AREA OUTLINED WITH YELLOW DOTS AT EAST END OF MIXING FLOOR. OPERATOR WILL ALSO NEED A FIBER DRUM TO PLACE EMPLY W-349 BAGS INTO. OPERATOR WILL BARRICATE AN AREA APPROXIMATELY 7-1/2 FEET ON ALL FOUR SIDES OF THE TANK WITH WARNING TAPE. WARNING TAPE THAT READS "CAUTION DO NOT ENTER". ONLY OPERATOR INVOLVED WITH LOADING OF THE RED LEAD PIGMENT IS PERMITTED TO ENTER THIS BARRICADED AREA FROM THE TIME LOADING STARTS UNTIL THE AREA IS CLEANED. OPERATOR WILL PLACE LOADING CHUTE INTO MIXER PORT. IF HIGH RISK BATCH, MIXER MUST BE INERTED. WHEN OPERATOR REACHES THE STEP ON BATCH CARD THAT CALLS FOR W-349, HE SHOULD PUT ON HIS PROTECTIVE EQUIPMENT AND LOAD THE W-349 THROUGH CUTE VERY CAREFULLY SO AS NOT TO CREATE ANY DUST. OPERATOR SHOULD TAKE EACH BAG AS HE OR SHE EMPTIES IT AND ROLL THE BAG UP WHILE BAG IS STILL FACING INTO TANK, THEN PLACE EACH EMPTY BAG INTO FIBER DRUM VERY CAREFULLY. AFTER THE W-349 HAS BEEN LOADED, OPERATOR SHOULD PLACE ALL HIS PROTECTIVE EQUIPMENT INTO THE FIBER DRUM ALONG WITH THE BAGS, THEN SEAL DRUM. OPERATOR SHOULD MOP AREA WITH SOAP AND WATER AFTER COMPLETING THE W-349 LOAD. AT END OF SHIFT THE OPERATOR IS REQUIRED TO TAKE A SHOWER.

#### F. MIXER AGITATION

MIXER MUST BE SHUT OFF AFTER EACH SAMPLE IS TAKEN, BECAUSE EXCESSIVE ADITATION COULD GENERATE HEAD BUILD UP AND COULD CAUSE SPONTANEOUS COMBUSTION. MIXER OPERATOR WILL ATTACH A SIGN TO MIXER THAT HAS W-349 RED LEAD ADDED. SIGN WILL HAVE A WHITE BACKGROUND WITH RED LETTERS READING "CAUTION RED LEAD PRODUCT DO NOT OVER AGITATE".

#### G. REACTIVITY

RED LEAD IS AN OXIDIZING SUBSTANCE WHICH REACTS WITH ORGANIC MATERIALS TO GENERATE SUFFICIENT HEAT TO PRODUCE SPONTANEOUS IGNITION.

### H. TIME LIMIT IN MIXER

"OK TO FILL" MATERIAL MUST BE FILLED AS SOON AS POSSIBLE. MATERIAL SHOULD NOT BE ALLOWED TO REMAIN IN MIXER OVER WEEKEND, BECAUSE OF THE POSSIBILITY OF HEAT BUILD-UP FROM SOME SOURCE WHICH COULD LEAD TO SPONTANEOUS COMBUSTION.

# I. WIPER

BECAUSE OF THE GREATER POTENTIAL FOR SPONTANEOUS COMBUSTION CAUSED BY RED LEAD PIGMENTS, WIPER CONTROL PROCEDURE (SAFETY PROCEDURE #12) MUST BE FOLLOWED.

DOMINIQUE R. AZEMA

DOC #76 G6R

Date: 04-05-90

S.D.: 10-30-89

TICKLER DATE: 04-15-91

Revised by: R.R. Gnoss

Approved by: G. a. Currell

Subject: SPILL PREVENTION CONTROL AND

COUNTERMEASURE PLAN

### I. INTRODUCTION

A spill may represent an acute explosion, fire, or pollution hazard, or a combination of these hazards. Any spill calls for prompt effective action. Spills may be "Controlled", or kept within the manufacturing site or "Uncontrolled:, whereby material escapes the manufacturing site. The prime concerns in the event of a spill are personnel protection, property protection, containment, the environment, and clean-up.

Extensive facilities are provided at Toledo to prevent discharge of oil and related materials that could result in pollution outside plant property. Effective spill prevention and containment procedures have been developed to control accidental discharge resulting from equipment failure or operating errors. These preventative measures are described in this Spill Prevention Control and Countermeasure (SPCC) Plan.

#### II. OUTLINE

- A. RESPONSIBILITIES
- B. CONTROLLED SPILL
- C. UNCONTROLLED SPILL
- D. MAINTENANCE OF SPILL EQUIPMENT
- E. REPORTING AND RECORDING
- F. FACILITY INFORMATION
- G. ATTACHMENTS

G-14-1

ATTACHMENT 1

Date: 04-05-90 S.D.: 10-30-89

### III, DETAIL

### A. RESPONSIBILITIES

### 1. FIRST LINE SUPERVISOR & AREA PERSONNEL

The first line supervisor on the scene will act as the spill coordinator during most spill situations. He/she will have the responsibility to coordinate the safe cleanup of spills not requiring the TERP TEAM. If TERP response is required, the first line supervisor on the scene will provide personnel and equipment to assist them. (Automatic evacuation of the immediate area and notification of the TERP leader is required if material classified S-5 or above is spilled.)

Other responsibilities will include:

- A. Calling the fire or brigade chief to the scene to evaluate the fire hazard.
- B. Notification of the plant guard to call the TERP leader if the situation warrants it.
- C. Keeping spill lockers fully stocked.
- D. Clean-up of spill equipment (except for equipment which may need hazardous material decontamination.)
- E. Investigation of the spill and corrective action.
- F. Completion of the Plant level Spill Report.(Form #C-30 see attachment A.)

### 2. FIRE BRIGADE

The plant fire brigade's primary responsibility will be to provide fire protection for plant personnel and equipment.

On weekends the brigade chief will also act as the spill coordinator unless he determines that the TERP leader ( B.JENNE OR R.GROSS) needs to be called to the scene. (Automatic evacuation of the immediate area and notification of the TERP leader is required if material classified S-5 or above is spilled.) If TERP assistance is not required, area personnel and the fire brigade will be responsible for the safe, efficient clean-up of the spill.

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The plant fire and/or brigade chief will be responsible to the TERP leader when he is on plant because of a spill. If a fire occurs or the spill becomes unmanageable, the alarm will be pulled and plant safety procedure #19 will be implemented. Evacuation routes and procedures, emergency medical treatment, first aid, safe distances and place of refuge are spelled out in safety procedure #19.

### 3. TERP TEAM

The TERP leader will be the primary authority as to what action will be taken if they are called to a spill.

Their responsibility as far as cleaning up a spill will vary depending upon the severity or the type of material spilled. (Automatic evacuation of the immediate area and notification of the TERP leader is required if any material classified S-5 or above is spilled.) They will also be responsible for contacting any additional personnel who may be needed. These could include: The plant fire brigade, Hazardous Materials Committee, Anthony Parchomencko(ECC), Medical Coordinator, or whoever else may be needed to assist them.

TEAM MEMBERS
BOB JENNE CO-LEADER
RON GROSS CO-LEADER
FETE HAMEL
SCOTT LANDIS
KEN HOLBEIN
CLAIR GOULDING
GUY ATTANASIO



Non-responsive

### 4. ENVIRONMENTAL CONTROL COORDINATOR

Tony Parchomenoko the plant ECC will be responsible for monitoring plant clean-up activities both on and off the site in the Toledo area. He will call the appropriate agencies to advise and update them as to the status of a spill when necessary. The ECC will collect all the information necessary for required after action reports for both on and off site incidents. He will also act as a liaison with the media for any spill information. (The ECC will monitor most spills through spill reports His presence at the scene will not be necessary unless

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5. HAZARDOUS MATERIAL COMMITTEE: P. MCHUGH/C. ESTEL

The hazardous material committee will have the responsibility of providing technical assistance to the spill coordinator, if requested.

#### 6. MEDICAL COORDINATOR

The medical coordinator will provide medical assistance (emergency care and medical monitoring) when required or requested.

### B. CONTROLLED SPILL

1. A controlled spill is one in which materials are prevented from leaving the manufacturing site in a condition which would violate government regulations.

#### 2. RESPONSIBILITY

See Responsibilities Section A. and Responsibility flowchart. (Attachment B.)

### 3. ACTION GUIDELINES

- A. Stop source of spill if possible. (If material is known S-5 or above evacuate bldg. immediately and have the guard call the TERP leader.)
- B. Notify immediate supervision if available. If the spill occurs on the weekend proceed to C.
- C. First line supervision or the area personnel should immediately call the plant fire or brigade chief to survey the scene if they feel there is a fire hazard.
- D. Members of the fire brigade should be in stand-by readiness in case of a fire, if conditions require brigade support.
- E. The fire chief, or his alternate shall have the option of calling the TERP leader and/or the Toledo fire department if it is his opinion that such support is needed. The guard should be informed of the source and location of the spill so he can inform anyone he is told to call.

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F. Sight-seems must be kept out of the area and excess personnel returned to a safe area.

- G. Clean-up crews should be organized by the spill coordinator to account for their whereabouts at all times.
- H. Clean-up crews should be adequately protected with the proper P.F.E. for the condition present. (This will be determined by the spill coordinator.)
- I. The progress of the clean-up will determine how rapidly personnel may return to their work areas, but priority should be given to releasing the Toledo Fire Department at the earliest time.
- J. Guards should be instructed not to allow anyone to enter the plant who has not been called.
- K. Actual procedures for clean-up of a spill will vary with location and type of material, but the following general precautions should be taken, as follows.
  - Treat and/or care for anyone splashed with material.
  - Determine the source, and identify the material involved in the spill. Contact the appropriate personnel. (See Responsibility Flowchart. Attachment B.)
  - 3. Confine the spill.
    - ' If necessary cover spill with sorb-all to reduce fumes.
    - \* Dam with sorb-all or absorbent pigs.
    - \* Put seals over sewer manholes to prevent from going into the sewer system.
    - \* Plug roof drains, floor drains, etc.
  - 4. Cordon off affected area.
  - 5. Utilize an explosimeter to determine whether conditions warrant full readiness of fine extinguishers—pins pulled and charged if in explosive range. In standby position if not in explosive range.

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 Protect individuals properly who are to clean up the spill. All others should leave the area.

- 7. Work outside of spill towards center.
- 8. Absorb or neutralize spilled material per specific instructions. (MSDS sheets located in the Lab clerk's office.) As a backup use the Non-responsive Corperate Medical Information telephone no.1-800-441-3637.
- 9. Make use of open head lined drums to dispose of materials picked up and any mop water. Do not seal drums until all visible signs of chemical reactions are complete. Pierced or leaking containers should be placed in recovery drums.
- 10. Use personnel from area where spill occurred when feasible.
- 11. Label drums so that disposal can be handled properly. (See Attachment C.)
- 12. The Spill Coordinator is to assure that employees involved in spill clean-up and whose protective clothing becomes contaminated, remove the clothing and shower; that the contaminated clothing is placed in a closable container, labeled as to its content and that any person engaged in laundering or cleaning the clothing is informed of the hazard and its potentially harmful effects.
- 13. After the spill has been picked up, it may be necessary to mop a small area at a time 4'x 4' with a suitable solvent followed immediately with hot soap solution and then dry mopped.
- 14. It is the responsibility of the Area First Line Supervisor to reorder at once, spill materials that have been consumed so that the spill lockers can be restocked.
- 15. If the material spilled is S-5 on above there may be special handling requirements. Check MSDS sheets located in the Lab on if needed a more detailed MSDS sheet can be obtained by the TERF leader from the Vac system

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(Hazandous material spills if S-5 or above should be handled by the TERP TEAM unless it is a very small amount that can be nuetralized and cleaned up safely without their assistance.)

#### C. UNCONTROLLED SPILL

1. An uncontrolled spill is one which discharges or deposits materials upon property or into waterways or causes offensive air pollution off the manufacturing site, in excess of permissible limits in violation of permits or control regulations or which could cause significant environmental damage.

#### 2. RESPONSIBILITIES

See Responsibilities Section A.

#### 3. ACTION GUIDELINES

- A. The TERP leader will assign containment and clean-up duties.
- 8. It may be necessary to move absorbent booms, absorbent pads, drums, etc., to the Larchmont School area, or other site by company vehicle.
- C. The TERP leader on the ECC, if necessary, will call O. H. Materials, 1-800-537-5660, who maintains 24 hour service with a variety of containment and clean-up equipment such as booms, skimmers, absorbents and vacuum equipment.
- O. Normally, material leaving the plant in the storm sewer will appear in the open ditch in ream of Larchmont School area in approximately 30 minutes. Time is most important in moving equipment to this area.

Materials entering the plant sanitary sewer system should be contained with booms, etc. at the manhole east of the finished product warehouse. Any materials leaving the site will flow into the City system on Harris Street flowing south. Appropriate action to contain the flow with proper notification to City and neighbors is required.

E. Communications between the Plant and Larchmont area (GL) he by the survey sadde

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F. The ECC, or his designate, will phone notification of discharge to authorities and follow-up with written reports, as required. (See Reporting and Recording Section E.)

#### D. MAINTENANCE OF SPILL EQUIPMENT

- 1. Spill lockers are to be maintained in Resin 1-G alleyway, all three floors of the Enamels Area, T/W Shed, receiving, and shipping. Area supervision is responsible for maintenance of these lockers. Materials for spills in the storm system traveling to the Larchmont School area, or required for blocking the sanitary system, are located in a spill locker which is located in the building between Mechanical Shop and the Filling Floor. This locker is maintained by the TERP team.
- 2. The contents of the spill locker are to be posted on the outside of each door.
- 3. At least once per month the contents of these lockers are to be inspected by someone in the area in which they are located to insure that all equipment is present and in good condition.
- 4. Recommended contents of a spill locker should include:
  - a. Six pairs of flame retardant coveralls.
  - b. Four squéégees and two shovels all spark proof.
  - c. Six pair of boots.
  - d. Two raincoats.
  - e. Six pair mono goggles.
- Other spill protection, location and responsibility to audit.
  - a. Sorb-all skids stored in basement. Storenoom operator is in charge of keeping a minimum amount on hand.

-smaller amounts stored throughout plant.

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b. Manhole seals— at each manhole location. Maintained by mechanical.

- c. Air vacuum pumps Peterson Garage, Filling Floor, Resin area.
- d. Booms, pads, ropes, and metal stakes. in spill locker located under Lab between Filling Floor and Mechanical Shop. Maintained by the TERP team.
- e. Weir pump (For pumping material out of storm sewer catch basins.) Located under Lab between Filling Floor and Mechanical Shop. Maintained by the TERF team.
- f. Various Equipment TERP Trailer Which is maintained by the TERP team.
- g. Emergency Kit (Plant Maps)
  - \* Storm Sewer Map T-491-G
  - \* Sanitary Sewer Map T-443-G
  - \* Drainage Ditch System T-747-G
  - \* Located in guardhouse, Resin Office, Maintenance Office and attachment F of this procedure.

## E. REPORTING AND RECORDING

- A. The Spill Coordinator or someone he/she designates will have kept a running log of events during a spill showing all times and events taking place. This will be used for subsequent reports and as a historical record.
- 8. After a clean up, a spill report (Form # C-30) will be completed by the area supervision. Copies will be distributed. Special reports which may be required by outside agencies will be completed by the ECC or his designate.
- C. Note that special reporting requirements are required by Title III if the spill goes off-site. Refer to attached Table of "Special Spill Notification Chemicals" Attachment D. This table is reviewed and updated by the ECC.

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a. If a spill occurs above the pound level shown under either the "302" hazardous chemical column or the "CERCLA" column, then the Local Emergency Planning Committee and State Emergency Response Commission must be called immediately.

- b. If a spill occurs above the pound level shown under the "CERCLA" column, then the National Response Center must also be called.
- c. Refer to the attached "Worksheet Emergency Release Notification" to prepare information for the communication. (See Attachment E.)
- D. Notification off-plant
  - a. Toledo Environmental Services Agency Attn: Ed Racz or Lee Pfouts City of Toledo

Days - 693-0350 Nights and Weekends - 245-1000

b. Local Emergency Planning Committee, (Title III)

Attn: Bill Halsey

Days on Nights - 389-9121

Ohio EPA - for State Emergency Response Commission, (Title III)

phone 1-614- 644- 2260

 National Response Center - Calls to be made by Environmental Coordinator or his designate.

phone 1~800-424~8802

4. O.H. Materials for spill cleanup assistance.

phone 1-800-537-5660

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5. Wilmington Staff - Day phones - Ducom No.

Mfg. Manager - A.W. Andresen - 774-7445 office SHEA Coordinator - J.R. Randall - 774-6113 office Public Affairs - F.L. Gilmone - 774-6121 office

D. Notification to news media

Any news release will be made by the Communications and Public Affairs Chief. (Production Superintendent.)

E. Reports

Written reports to government agencies will be made only with the advice and consent of DuPont Legal Department.

F. Follow-Up

An investigation will be held following each spill. Recommendations will be made to prevent future spills and establish guidelines or make necessary revisions to existing procedures and/or facilities.

#### F. FACILITY INFORMATION

1. Containment and Diversion

Dikes

All outdoom bulk storage tanks used for oil and nelated materials are adequately diked as required by engineering standards. These dikes are not automatically drained, but physically inspected before pump-out. Any collectable material will be inspected and then pumped out into drums, portable tanks, or tank trucks for proper disposal.

Truck unloading stations are protected by concrete curbs to contain a spill.

Transfer pumps are located inside dikes.

DACETY PROCEDURE 42

Oate: 04-05-90 S.D.: 10-30-89

Storm Sewer Special Manhole Covers

Special covers fabricated from steel plate and sponge nubber hose have been placed next to each storm sewer manhole, in event of a spill, the cover is placed over the manhole and provides a seal to prevent material entering the sewer system. A weight is placed on the cover to provide a more effective seal.

#### Roof Drain Diversion

Two roof drains in the Resin Area have been removed from the storm sewer system and routed into a holding tank. Accidental tank overflow from storage tank vents are kept from entering the storm sewer system.

Each tank in E-Bldg, has a small collection system for the tank vents which helps prevent condensation from entering the storm sewer. If a tank were overfilled the collection system would also come into play.

Solvent Fume Detectors

Solvent fume detection units have been installed in both EFA sampling points in the storm sewer system. Also, units have been installed in two locations in the samitary sewer system: (1) near the Powerhouse, and (2) East of the Finished Product Warehouse.

These units will detect any spilled material in the storm or samitary sewer systems and give on alarm locally and at the Front Guardhouse so that contains of measures may be started immediately.

#### Tankwagon Loading Station

The tankwagon loading shed will contain spills up to 2100 gallons. Procedures call for an employee in attendance at all times when loading is underway.

#### Maps

All markeles and sewers have been identified and marked. Attached to this plan are copies of (1) the flant storm sewer system, (2) the Flant sanitary sewer system, and (3) the drainage ditch system in Dufford area. (See Attachment F.)

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#### Resin K-Bldg Facilities

K-Bldg, is equipped with floor drains which drain into a small catch basin in the dock area north of K-Bldg. This catch basin has a sump pump which pumps material onto the gravel on the east-side of the dock.

#### Storage Tank Maximum Working Levels

- a. All storage tanks must maintain a 10% freeboard volume to reduce the potential for overflowing and causing spills. For example, a 10,000 gallon tank should not be filled above the 9000 gallon level.
- b. Tank freeboard limits may be exceeded, when imperative, only after the particular pumping operation has been reviewed and approved by the Area Supervisor responsible. The maximum working level should be clearly marked on all tanks and related level gauges.

#### Solvent Pipeline Protection

Solvent pipelines from the North Tankfarm to the Production Areas have been moved high enough to clear vehicular traffic, or have been protected with heavy guardnails.

#### 2. Training

- a. All personnel are made aware as part of their orthe-job training, of the necessity for proper operation of plant equipment and maintaining vigilance when pumping solvents, paints, resint, or other flammable liquids.
- b. Spills of any magnitude are publicized via daily "Communication Items". These descriptions of the incidents are used in daily "quickic" meetings, co-operative meetings and are posted on plant bulletin boards.
- o. The Plant Temp Team is trained in handling hazardous materials spills. This team handles spill cleanup calls both on and off the plant site.

DATE: 04-05-90 S.D.: 10-30-89

d. The Plant Fire Brigade and Plant Mechanical Department are available to the Terp Team as resources to offer assistance for safety and fire protection. Their knowledge of plant facilities, sewers and drains help determine where to place absorbent materials in sewers, how to reduce water flow levels in the sewers, etc.

- e. Area personnel are trained by their first line supervisor to handle small spills in their own area. Included are methods of neutralization, containment, fire protection and clean-up.
- f. Maps of sewers and ditches are a part of the Disaster emergency kits which are located in the Front Guardhouse. These maps are attached and are an integral part of this SPCC Plan.

#### 3. Storm Sewer and Drainage

All process non-contact cooling water, roof drains, normal storm run-off, etc., are collected in a plant sewer system. The storm sewer, a 48" concrete tile leaves the plant on the east side and travels underground approximately 3/4 mile where it opens up into an open ditch. From here to Halfway creek, an inlet of Maumee Bay in Michigan, a distance of approximately five miles it is alternately underground and in an open ditch.

#### 4. Direction And Quantity of Flow

#### a. Tanks

Since outside storage tanks are in diked areas, all major sewer spills from tanks will probably occur inside buildings.

Floor drains inside buildings have been eliminated, so floor spills should generally be contained inside.

Roof spills from tank vents, however, will discharge into the east or west storm sewers from roof drains.

A 20,000 gallon containment pit north of the Mechanical Storenoom will contain a full tank spill from Resin storage Building "E".

Date: 04-05-90 S.D.: 10-30-89

#### b. Drums And Portable Tanks

A leaking drum would normally create a smaller spill (55 gallons) than a processing error. Manhole covers would have to be used on the drains near the receiving pad. The storage pad north of the warehouse has a shut-off valve which controls drainage.

#### c. Tank-Wagons

The tankwagon shed east of Mechanical will contain a spill up to 2100 gallons via a containment pit in the floor area.

Tank spills of up to 10,000 gallons could occur at the west tankfarm dock area, or the north tankfarm. Locations are protected by concrete curbing.

#### · d. Flow Rates

The highest flow rates to the catch basin in the storm sewer will occur during heavy rains. The average summer flow can approach 180 GPM in the west basin and 420 GPM in the east basin. The peak rates during rain approach 300 GPM in the west basin and 650 GPM in the east basin.

#### e. Sewer Effluent Monitors

Temperature and flow recorders along with combustible gas alarms have been installed in the storm sewers. Alarms have also been installed in two locations in the samitary sewer system. The instruments are mounted on the cast and west walls of 1-A basement, the first floor of 1-A, the Fowerhouse, and the east wall of the finished Product Warehouse. The analyzers are also connected to a Panalarm unit in the Front Guardhouse.

Date: 04-05-90 S.D.: 10-30-30

The alarm points are set at 20% L.E.L. in the east catch basin (manhole 802) and in the writtensin (manhole 801) for the storm sewer. For the sanitary system two units are mounted, one east of the Warehouse and one south of the Powerhouse. A warning pilot light on the alarm instruments are set to go off when the L.E.L. reaches 10%.

The warning pilot will stay on until the spill is cleaned up and the L.E.L. drops below 10%. The gas analyzer should the be reset, with the button on the front of the instrument.

If the alarms go off outside the Powerhouse, the most likely source is the vacuum pump in the solvent recovery area, the storage tanks there, or the mop water tank and pump system west of solvent recovery. If the alarm goes off only near the Warehouse, the most likely sources would be Resin Area (Bldgs. 1-J,1-H,1-F) or the Enamels area (Bldgs. 1-A, 1-B).

#### 5. Security

All plant storage and operating facilities are located inside a security fence. Access gates are kept locked in off-hours, and full time guand protection is provided. Standby valves and pumps are locked and tagged when not in use, and pisclines are capsed or blanked to provent accidental discharge of materials. Several video security cameras are monitored in the Front Guardhouse covering the perimeter fence line.

#### SIGNATURE PAGE

Pr	er	ar	ha.	$\mathbf{b}\mathbf{v}_{c}$

oduction Supervisor

Approved by:

Environmental Control Coordinator

Date: 4/17/90

Certified by: 6.

Registered Professional Engineer

# ATTACHMENT A

(Kev. 4/3/90/	E. G. Melin W. J. Jarusiewicz
	J. Hammond R. R. Gross
NUMBER	D. L. Starkey D. R. Young
	A. M. Maier G. A. Currall
	D. R. Azema G. E. Cross
DATE	SEVERITY INDEX
To: TONY PARCHOMENKO - ENVIRONMEN	ITAL CONTROL CO-ORDINATOR
DATE OF SPILL:	TIME:
LOCATION: (AREA)	BLDG:
EQUIPMENT:	SAMPLE TAKEN: YES NO
MATERIAL:S-CODE	E: SPILL DUE TO: HUMAN ERROR OR
QUANTITY:	EQUIPMENT FAILURE
PRODUCT RECLASSIFICATION SHEET #	SPILL ENTER STORM SEWER?
TROBOUT RECEIVED LITTOR BILLING II	SANITARY SEWER?
OXYGEN ANALYZER READINGS: % LEL	% OXYGEN
	(SPECIFY NUMBER)
DRAEGER TUBE RESULTS:	PPM
	HEALTH EXPOSURE DATA?OR NEUTRALIZE SPILL:
	•
CAUSE OF SPILL:	
·	
ACTION TAKEN TO PREVENT RECURRENCE	1:
<u> </u>	
	•
PREVENTATIVE ACTION COMPLETED:	
SIGNATURE:	AREA:
RRG/mer	

# SEVERITY FACTOR

#### QUANTITY

#### B. HFR DESIGNATION

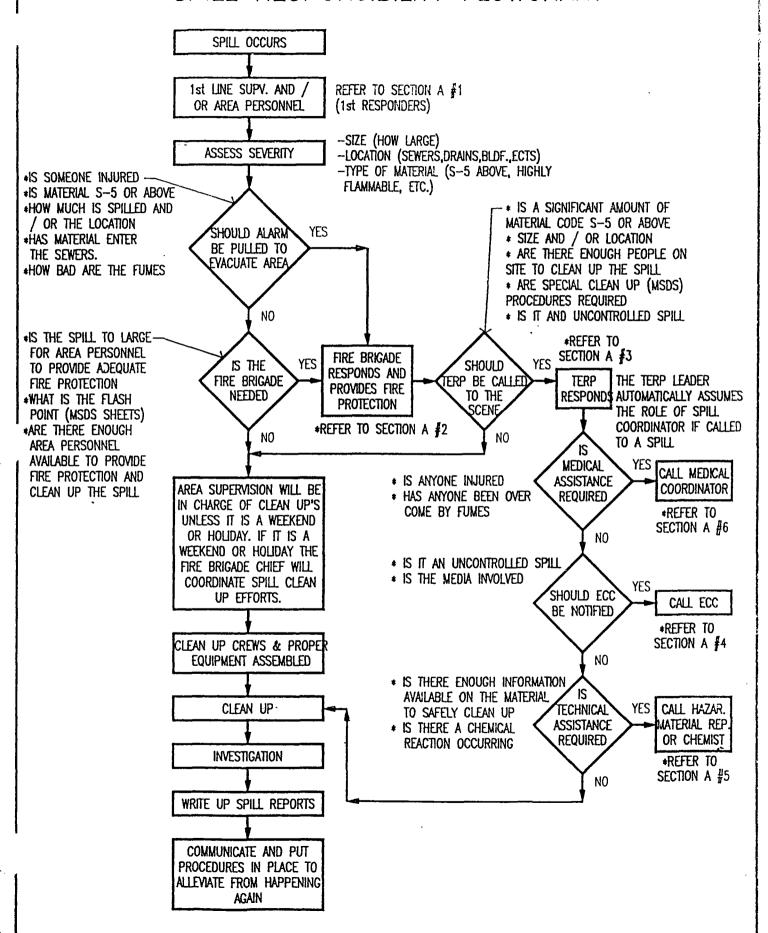
GALL	ONS/LBS	FACTOR	If total of all HFR Rating Points is:	ADD POINTS
56	- 55 - 110 - 500	1 0 1 to 2 4 3 8 4 10 5 6 7 8		0 1 3 6 10 14 16 18
		ITEM		FACTOR
c.	ACTIVATED:	Plant's Fire B		5 10
D.	SPILL ENTERED:	Plant's Sewer City Sewer Bey	5 10	
E.	RESULTED IN:		laint (Neighbors) stigation (City/State/Fed) /State/Fed)	5 10 15
F.	RESULTED IN INJURY:	First Aid Case Medical Treatm Restricted Work Lost Workday C	ent Case kday Case	3 5 10 25
G.	RESULTED IN:	Shutdown of Otl		5 5 n Section)
		Shutdown of Pla	ant -	25
н.	REQUIRED OUTSID	E CLEAN-UP CREW		<u>5</u>
TOTA	L SEVERITY FACTO	R (A+B+C+D+E+F+	G+H)	

\_\_\_\_\_\_\_

CAUSE OF SPILL SHOULD ANSWER THESE FOUR (4) QUESTION:

- 1. Is there a procedure in place?
- 2. Is the procedure adequate?
- 3. Was the procedure followed?
- 4. Was the person trained on the procedure?

# SPILL RESPONSIBILITY FLOWCHART



#### PROPER STENCILING OF WASTE FILLED CONTAINERS

1. DRUMS FILLED WITH PAINT CONTAMINATED MATERIALS MUST BE STENCILED IN THE FOLLOWING MANNER. (SORB-ALL, RAGS, ABSORBENT BOOMS, ETC.)

> WPS-32172 HAZARDOUS WASTE DATE-

2. DRUMS WITH NOTHING BUT PAINT OR PAINT RELATED MATERIALS NEED TO BE STENCILED:

WPS-32174 HAZARDOUS WASTE DATE-

3. DRUMS FILLED WITH RESIN ONLY NEED TO BE STENCILED:

WPS-29337 HAZARDOUS WASTE DATE-

#### ATTACHMENT D

# SPECIAL SPILL NOTIFICATION CHEMICALS - TITLE III

TOLEDO SPECIFIC 302 AND CERCLA CHEMICAL LISTS SEARCH OF TITTLE III CODES BY CAS NUMBER (DIVISIONAL) SEARCHED BY CAS NUMBER USING 06/06/89APD RM DATA BASE

CODE	DUPONT TITLE	CAS NUMBER	302	CERCLA
G- 55	P-BENZOQUINONE	106-51-4		10
G- 59	ACETIC ANHYDRIDE	108-24-7		5,000
G- 235	BENZOIC ACID	65-85-0		5,000
G- 243	PHTHALIC ANHYDRIDE	85-44-9		5,000
G- 284	ADIPIC ACID	124-04-9		5,000
G- 697	PHOSPHORIC ACID, 85% N.F.	7664-38-2		5,000
G- 744	ACRYLONITRILE	107-13-1	10,000	100#
G- 765	ACRYLIC ACIS - 200 PPM ME	79-10-7		5,000
H- 6	BUTYL ACETATE (99%)	123-86-4		5,000
H- 12	N-BUTYL ALCOHOL	71-36-3		5,000
H- 18	ISOBUTYL ALCOHOL	78-83-1		5,000
H- 30	ACETONE	67-64-1		5,000
H- 35	METHYL ETHYL KETONE	78-93-3		5,000
H- 41	METHONAL	67-56-1		5,000
H- 44	METHYL ISOBUTYL KETONE	108-10-1		5,000
н- 49	TOLUENE REDISTILLED 1'C.	108-88-3		1,000
н- 80	PRIMARY AMYL ACETATE	628-63-7		5,000
H- 284	AMMONIA 26'	1336-21-6		1,000
H- 314	ETHYL ACETATE - 99.5% POLY	141-78-6		5,000
H- 428	METHY METHACRYLATE MONOM	80-62-6		1,000
H- 513	ETHYL METHACRYLATE MONOME	97-63-2		1,000
H- 583	XYLOL (135 - 146°C)	1330-20-7		1,000
н- 603	ISOPHORONE	78-59-1		5,000
н- 669	TRIETHYLAMINE	121-44-8		5,000
н- 687	AMMONIA - REFRIGERATION G	7664-41-7	500	100
H- 710	STYRENE MONOMER (RUBBER G	100-42-5		1,000
H- 813	ISOBUTYL ACETATE (M.W. 11	· 110-19-0		5,000
H- 845	PROPYLAMINE	107-10-8		5,000
₩- 52	ANTIMONY TRIOXIDE	1309-64-4		.1,000
W- 636	STRONTIUM CHROMATE	7789-06-2		1000#
W-6001	ZINC DUST	7440-66-6		1,000

# WORK SHEET EMERGENCY RELEASE NOTIFICATION

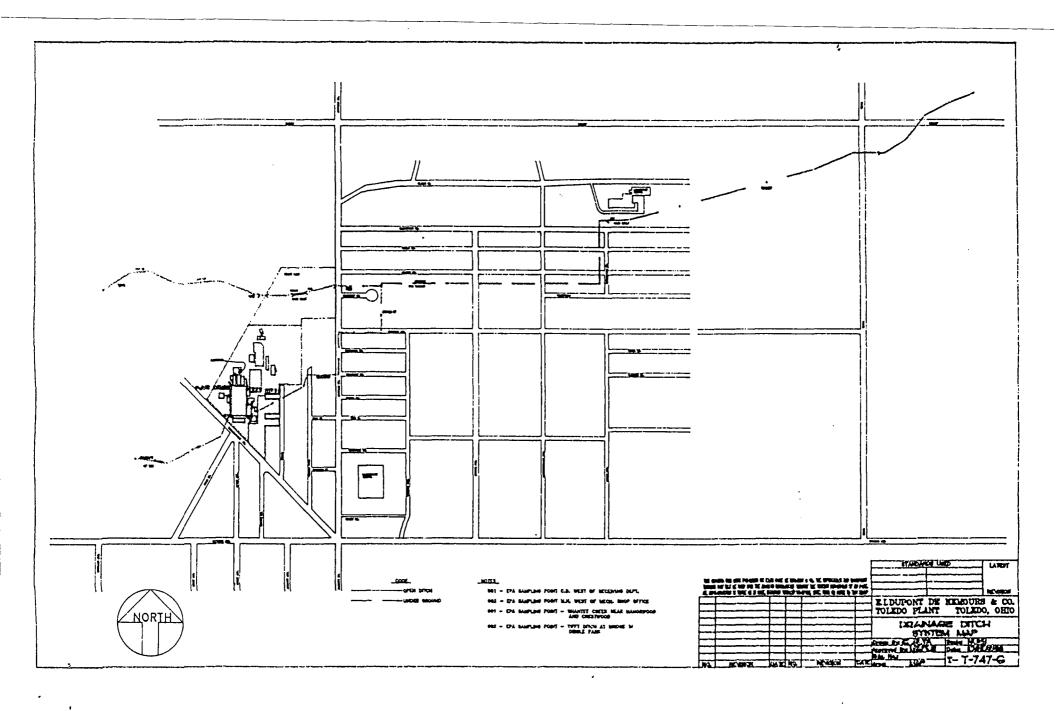
# EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW

This reporting is applicable ONLY for the release of a Reportable Quantity of any "EXTREMELY HAZARDOUS SUBSTANCE" or a CERCLA HAZARDOUS SUBSTANCE which results in exposure to persons OUTSIDE the site boundaries. The following Information is for the State and local Title III agencies and is to be reported without delay to the extent the information is known at the time.

LOCAL EMERGENCY RESPONSE AGENCY: (Taledo Fire Disputch. #). PHONE: 389-9121
STATE COMMISSION: (Chie EPA - Columbus) PHONE (614)-644-2260
LOCAL COMMITTEE: PHONE: - Same as 10
NATIONAL RESPONSE CENTER (if required under CERCLA 40 CFR 302.6): PHONE: (800) 424–8802
RELEASE INFORMATION
START REPORT WITH ONE OR THE OTHER OF THESE PREFACES:
chemical release in progress and request emergency response from fire and other agencies in accordance with prior plans. The emergency release includes a Title III (choose one) "Extremely Hazardous Substance" or a "Superfund (CERCLA) Hazardous Substance." The following information is available: (read numbers 1 through 10 below).  OR  66This is the (Dufant Finishes) plant located in (Toledo Ohio). This call is to relay information only, in compliance with Title III reporting requirements. We have had a reportable release but we do not believe it warrants an emergency response. The following information is available: (read numbers 1 through 10 below).
1. CHEMICAL NAME OF SUBSTANCE RELEASED
2. QUANTITY RELEASED (LB)
3. DATE OF RELEASE
4. TIME OF RELEASE

(Nos. 7-10 continued on the back)

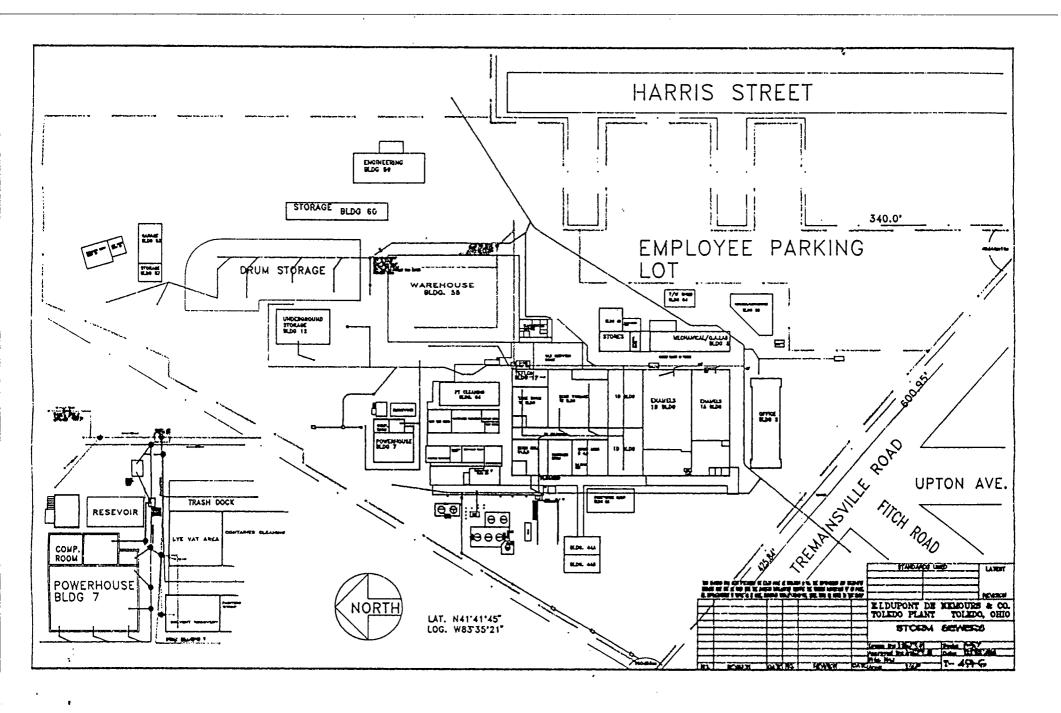
EMERGENCY RELEASE INFORMATION (continued):
5. DURATION OF RELEASE
6. RELEASE WAS INTO: AIR SURFACE WATER SEWER GROUND
7. ANTICIPATED ACUTE OR CHRONIC HEALTH RISKS:
The state of the s
8. ADVICE ON MEDICAL ATTENTION FOR EXPOSED INDIVIDUALS (IF APPROPRIATE):
9. PROPER PRECAUTIONS TO TAKE (INCLUDING EVACUATION IF APPROPRIATE):
Burger and the second of the control of the second of the
is. Has militared to the service has a service to the months of the transfer of the great of the great service to the months and the control of the months of the control o
10. NAME AND PHONE NO. OF PERSON TO CONTACT FOR FURTHER INFORMATION:  PHONE:  11. PESPONSE ACTIONS TO CONTAIN THE DELEASE.
11. RESPONSE ACTIONS TO CONTAIN THE RELEASE:
na kontrologija se provincija se provincija se provincija se provincija se provincija se provincija se provincija Provincija se provincija s Provincija se provincija s
PERSON MAKING NOTIFICATION
DATE AND TIME OF CALL AND PERSON RECEIVING THE CALL:
DATE AND TIME OF CALL AND PERSON RECEIVING THE CALL:
DATE AND TIME OF CALL AND PERSON RECEIVING THE CALL:  LOCAL RESPONSE AGENCY: date time name
transport of the control of the con
LOCAL RESPONSE AGENCY: . DATE NAME
LOCAL RESPONSE AGENCY: DATE TIME NAME  STATE COMMISSION: DATE TIME NAME

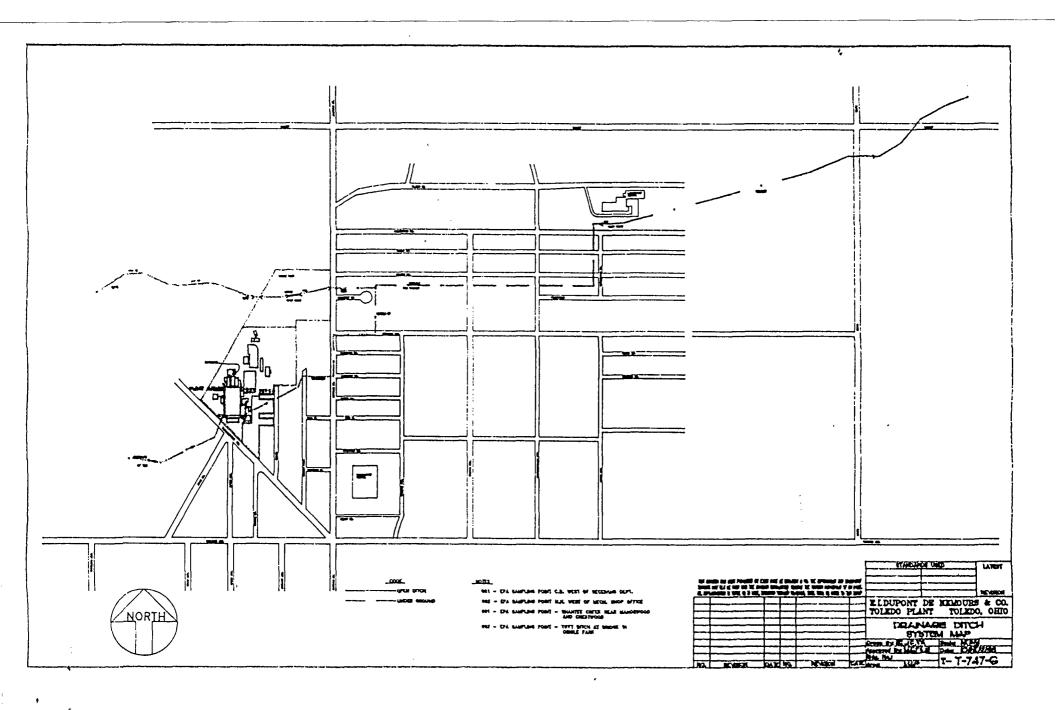


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# STANDARD QUPOND PRACTICE V-9

Plant Toledo

Dep't. General

Area All

Subject Pollution Complaint Handling Procedures

#### I. INTRODUCTION

The purpose of this standard practice is to define air and water pollution, procedures for receiving and handling pollution complaints and to outline areas of responsibility.

## II. OUTLINE

FF-1642

- A. Pollution Definition
- B. Complaint Handling Procedures
- C. Responsibility
- D. Action Plan Serious Pollution Incident

#### III. DETAIL

(

# A. Pollution - Definitions

# 1. Air Pollution

"Is the presence in the ambient air of dust, fumes, gas, mist, smoke, vapor or odorous substances in sufficient quantity and of such characteristics and duration as is or threatens to be injurious to human health or welfare, plant or animal life, or property, or which interferes with the comfortable enjoyment of life or property."

## 2. Water Pollution

Is the contamination of a waterway by the release of toxic or hazardous materials which might be injurious to human health or welfare, plant or acquatic life and which is in direct violation of governmental control. Air pollution may possibly result from a water pollution incident.

# B. <u>Pollution Complaint Procedures</u>

1. Complaints from neighbors, governmental agencies or plant personnel require that immediate action be taken to locate the source, correct the condition, make reports and maintain good relations with the public.

ATTACHMENT G-11-1

Date: March 4, 1983

S.D.: 11-7-78

# III. DETAIL (continued)

# B. Pollution Complaint Procedures

- 2. The person receiving the complaint should obtain such information as:
  - a. Name, address, phone number of the complainant.
  - b. Nature of the complaint in detail, odor, noise or water pollution.
  - c. Wind direction and velocity, weather, time.
  - d. Other comments.
- 3. A "Pollution Complaint Report", copy attached, must be completed as soon as practical by member of supervision receiving the complaint. This form will be forwarded to the Environmental Control Coordinator (ECC).

# C. Responsibility

# 1. Day Shift

- a. The ECC will be responsible for taking immediate action on complaints, seeing that corrective action is taken, making necessary reports to company and government agencies.
- b. Upon receipt of a complaint, the ECC will immediately notify all Area Supervisors to begin searching their areas.
- c. Each Area Supervisor shall have in their possession, a check list of potential emission points. These shall be checked off in addition to making a general tour of his Area.
- d. Each Area Supervisor shall report to the ECC within ten (10) minutes if possible of his findings, even if negative.
- e. Every effort will be exerted to eliminate a source of pollution using both Production and Maintenance personnel as necessary.
- f. Form C-29 (Rev. 3-4-83) will be completed by the ECC and he will make such reports or recommendations as are deemed necessary.

# 2. 12 - 8 and 4 - 12 Shifts

a. Complaint is normally handled by the Shift Supervisor or the ranking member of supervision.

Date: March 4, 1983

S.D.: 11-7-78

# III. DETAIL (continued)

- C. Responsibility (continued)
  - 2. 12 8 and 4 12 Shifts (continued)
    - b. Upon receipt of a complaint he will immediately assign a member of supervision to tour each operating area.
    - c. Each of these members of supervision shall have in their possession a check list of potential emission points. These shall be checked off in addition to making a general tour of his area. He shall report within ten (10) minutes if possible his findings to the Shift Supervisor, even if negative.
    - d. Every effort will be exerted to eliminate a source of pollution using Production and Maintenance personnel as necessary. Callin list shall be used for help and notification as deemed necessary.
    - e. Form C-29 (Rev. 3-4-83) will be completed by the Shift Supervisor and a copy forwarded to the ECC by 8:00 a.m. the following morning.
- D. Action Plan Serious Pollution Incident and Spills

See Standard Practice V-10.

cc: R. H. Clark )
C. E. Buonassisi) In turn
F. P. Hartz

TO: Environmental Control Coordinator

Toledo Plant

Toledo F.&F.P. Plant Date \_\_\_\_\_

# AIR POLLUTION COMPLAINT REPORT

From:					Ext		
(To be fi	illed out by	person rec	ceiving com	plaint			
Date:	Time:	am pm	How Rec	eived:	Letter□ Phone □		sonal□ er□
Name of Complain	nant						<del> </del>
Address of Compl	lainant		<del></del>	· · · · · · · · · · · · · · · · · · ·	Ph	one No	· · · · · · · · · · · · · · · · · · ·
Nature of Compladetected)							
	· · · · · · · · · · · · · · · · · · ·						
ather Conditio	ons at Time of	f Complain	ıt:				
Temperature:	°F	Win	nd Direction	n	Wind Velo	city	mph
Humidity: Hi	igh □ pw □	Atıı	osphere:	Clear 🗌	Cloudy □	Rain □	Snow 🗆
Source of Pollut	tion: (If for	und) expla	in in deta	il cause o	f emission:		
						<del>.</del>	
Action Taken to	Prevent Pecus	rence.		<del></del>			
ACCION PARCIL CO	THEVEIR RECUI	Tence					
			<del></del>				
Notes: (Follow-	up with compl	ainant, c	ontacts wi	th Pollutio	on Control	Agencies,	etc.)
	<del></del>	<del></del>	<del></del>				
		<del></del>				•	

or 968

DATE: May 26, 1981

SUPERSEDING: Nov. 4, 1971

#### S-13-1

#### MECHANICAL INSTRUCTIONS

TITLE: FIRE ALARM CONTROL BOARD - INSPECTION & TEST

(Ref: Gamewell Bulletin No. 1550, attached

. Eng. Std. S6A)

#### **PROCEDURE**

#### 1. General

The Gamewell Control Panel in the Main Breaker Room shall be checked and readings made daily. The four auxilliary batteries will be tested semi-monthly. Adjustments or repairs will be made at time of inspection. Fire Alarm Boxes are inspected on S-13-2.

## 2. Inspection & Test

The attached Gamewell Bulletin No. 1550 describes the tests to be made and recorded daily as follows:

- a) Volt loss to ground positive & negative.
- b) Milliamps reading.
- c) Voltage line reading.
- d) Trouble bell.
- e) Voltage battery.

Record also weather conditions and remarks such as water added to batteries, charge rates, troubles, etc. Twice each month check the specific gravity of the four batteries with a hydrometer.

#### RECORDS

Use attached "Daily Log Fire Alarm Control Board" sheets 1 and 2, and record all pertinent information mentioned in paragraph 2. Route completed forms to Maintenance Supervisor, Engineering Superintendent and to File.

Records shall be maintained for not less than 1 year and not more than 3 years.

of star

Superseding Date: 7/24/77

TITLE: FIRE PUMP INSPECTION & TESTING

# MECHANICAL INSTRUCTIONS

## GENERAL

The diesel driven fire pump shall be inspected and tested at intervals as noted below in order to assure proper operation. Repairs, if necessary or possible, shall be made at that time and reported to Mechanical Supervision. Results shall be recorded and placed on file in S-14 Fire Pump.

# PROCEDURE

# 1. Weekly

- a) At approximately 9:30 a.m. on Wednesday, open the bypass valve #7 located above the fire pump.
- b) Open the red 1/2" valve located behind the control panel and drain a small amount of water out into the bucket provided. The fire pump should then start. Close the valve and record. Then turn main switch in control panel to "TEST".
- c) Close the bypass valve #7 carefully until the pressure on the pressure gauge on the discharge side of the pump is approximately 85 to 90 psi. Record the pressure.
- d) Check and record the general condition of the pump and motor operation (smooth running, leaks, electrical connections, cleanliness, etc.).
- e) Check and record the fuel level. The level should be no less than 1/2 full.
- f) Check and record the oil level, oil pressure, cooling system temperature, the hour meter reading and tachometer reading.
- g) Check the pump bearings for roughness and hot operation.
  Lubricate each bearing with a lithium based grease. Record the results.
- h) Check and record the specific gravity of the two batteries using a battery hydrometer making sure to wear the proper protective equipment.
- i) Shut the pump off by turning the switch located in the fire pump control panel to "OFF".
- j) Close the pump bypass valve #7 completely.
- k) Turn the switch in the control panel to "AUTO", close and lock the door to the panel.

ATTACHMENT G-1K-1

#### RECORDS

Record the results of the test along with the date and inspector on an "S-14 Fire Pump Weekly Test" form. Route the results to the Maintenance Supervisor, Engineering Superintendent and then file in S-14 Fire Pump.

# 2. Semi-Annually

- a) Theck the fuel oil tank for any sludge buildup.
- b) Replace both fuel filter elements.
- c) Replace both engine oil filters.
- d) Drain and flush the cooling system. Replace the water filter elements.
- e) Remove and clean air filter elements and replace the oil.
- f) Lubricate the generator bearings, tachometer drive and throttle control mechanism.
- g) Check the drive belts for proper adjustment.
- h) Check the generator brushes for wear. Replace if necessary.

# **RECORDS**

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Record the results of the inspection along with the date and inspector on an "S-14 Fire Pump Semi-Annual Inspection" form and route to the Maintenance Supervisor, Engineering Superintendent and file in the S-14 Fire Pump.

# 3. Annual

- a) For the following tests, notify plant personnel and ADT (243-6266) according to Safety Procedure No. 44.
- b) Relief valve test
  - Start the fire pump by opening the red 1/2" valve located behind the control panel. Close the valve.
  - 2) Record the pressure on the gauge located at the discharge side of the pump. This is the regulating pressure.
  - 3) Slowly open the bypass valve #7 located above the pump until the relief valve reseats itself (minor leakage is acceptable). This is the reseat pressure; record it.
  - 4) Slowly close the bypass valve and record the pressure at which the valve begins to open. This is the set pressure. Record the pressure.

- 5) The difference between the set pressure and the reseat pressure (blowdown) should not be more than 8 to 10% of the set pressure. Record this difference. Failure of the relief valve to reseat at a pressure near the set pressure may mean that water which might be needed in fire-fighting would be lost through the relief valve.
- 6) Shut down and reset the fire pump according to the weekly test procedure.

# c) Capacity Tests

- 1) Open the bypass valve #7 located above the pump.
- 2) Start the pump by opening the red 1/2" valve located behind the control panel. Close the valve.
- 3) Check the tachometer to be sure the pump is at its rated speed. Record this speed.
- 4) Slowly close the bypass valve until the pump reaches the rated net pump pressure. The rated net pressure should be used when conducting the capacity test. For example, consider a pump which is rated at 100 psi. If the pump being tested has +10 psi suction pressure, the test discharge pressure should be 110 psi. Conversely, if the pump suction is -10 psi, (such as when the water supply level is below the pump), the test discharge pressure should be adjusted to 90 psi. Record this pressure.
- 5) When the pump is running at its rated net pressure, record the flow rate shown on the orifice flowmeter located on the well water control panel. Compare this with the rated capacity.
- 6) Open the bypass valve until the pressure is 65 percent of the net rated pressure.
- 7) Record the flow rate of the flowmeter. The pump should be able to deliver at least 150 percent of the rated capacity.

#### RECORDS

Record the results of the relief valve tests and capacity tests along with the inspector and date on an "S-14 Annual Fire Pump Test"; route it to the Maintenance Supervisor, Engineering Superintendent and then to file in S-14 Fire Pump. Records shall be maintained for not less than one year and not more than three years.

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Date:	5/27/81

Superseding	Date:
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TITLE: AUTOMATIC SPRINKLER SYSTEMS PLUGGAGE TESTS

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1. General

All automatic sprinkler systems shall be tested every five years to provide visual assurance that they are relatively free of scale, gravel, or other foreign material which could result in sprinkler line pluggage. Results of the test shall be recorded and placed on file in S-16 Sprinkler Systems.

The plant shall be tested according to the following test schedule:

Year 1 - Buildings 1A and 1B

Year 2 - Buildings C, D, E and the Warehouse

Year 3 - Building H and J Year 4 - Building F, 5 and 6

Year 5 - Building 2 and 3

# 2. Inspections

a. Notify the following plant personnel that sprinkler pluggage tests are to be performed without loss of sprinker protection.

Plant Manager or his representative Engineering Superintendent Maintenance Supervisor Shift Supervisor Area Supervisor of area involved ADT (243-6266)

Plant personnel shall be notified since performing pluggage tests will involve flowing water through the sprinkler system, ringing water gongs in the area involved, and running the fire pump.

- b. Open the 8" bypass valve on the diesel fire pump.
- c. Start the fire pump and close the bypass valve until the pressure on the discharger side of the pump reaches approximately 100 psi. ..
- d. Remove the cap from each Seco test valve and attach enough 3/4 inch garden hose to each Seco test valve to run the hose outside, if possible. If it is not possible to run the hose outside, place it into an open head drum or portable tank. Hoses shall be run overhead whenever possible to avoid possible tripping hazards. If it is not possible to run overhead, post warning signs (safety cones, expandable barricades, alert signs, etc.) to alert plant personnel of tripping hazards.

ATTACHMENT G-/1-1

- e. Position a man at the hose discharge to avoid whipping of the hose under pressure.
- f. Open the Seco test valve and flow water through the hose until a clear stream is present.
- g. If a Seco test valve does not flow water, flows weakly, or stops during the test, this indicates a pluggage in the line. In the event this happens, the following shall be done:
  - Shut off the Seco test valves.
  - Shut off the PI valve in accordance with Safety Procedure No. 44 "Fire Valve Shut Off".
  - Drain the sprinkler system through the 2" sprinkler draw off line until the pressure on both the riser pressure gauges are zero. To assist draining the line, open the vent valves on the sprinkler system. The vent valves are located at the highest point in the sprinkler system.
  - Starting at the Seco test valve, dismantle the sprinkler line until the source of pluggage is located and removed.
  - Reassemble the sprinkler line,
  - Close the 2" sprinkler draw off.
  - Open the PI valve and let water flow through each vent valve until a steady stream of water exists. (This indicates that all air has been removed from the sprinkler system.)
- h. Flow the Seco test valve again as before to assure the source of pluggage has been removed.
- i. Shut off the Seco test valve.
- j. Remove the garden hose and reattach the test valve cap.
- k. Install a tape around the sprinkler line at the Seco test valve showing the month and year the test was performed.
- Shut off the PI valve for the sprinkler system being tested according to Safety Procedure No. 44. "Fire Valve Shut Off".
- m. Drain the sprinkler system using the 2" draw off valve located at the sprinkler riser.
- n. Remove at least one sprinkler head per floor and place in an oven or heated water to determine if the head will break at the rated temperature.
- o. If any sprinkler head does not break at the rate temperature, remove at least an additional three sprinkler heads at various areas on that floor and test those heads.

- p. If any of the additional heads do not break at the rated temperature, then all the sprinkler heads on that floor should be replaced.
- q. Refill the sprinkler system according to the following:
  - Close the draw off valve.
  - Open the PI valve and fill the system until a steady stream runs out the vent lines.
  - Close the vent valves.

#### **RECORDS:**

Record the results of the tests along with the date, number of lines tested, number of heads tested, the PI valve and the inspector on an "S-16 Sprinkler System Pluggage Test" form. Route it to the Maintenance Supervisor, the Maintenance and Construction Supervisor and then file in S-16 Sprinkler Systems with a copy to the area supervisor. Records shall be maintained for not less than five years and not more than ten years.

diable

	Date:_	5/27/81	
Superseding	Date:		

TITLE: ANNUAL SPRINKLER SYSTEM - FULL FLOW DRAIN TEST

# MECHANICAL INSTRUCTIONS

# PROCEDURE: ----

# 1. General

All sprinkler risers shall be tested annually. A full flow drain test will determine pressure drop at the sprinkler riser. An excessive pressure drop may indicate a partially closed valve, physical obstruction within the supply pipe, or internal pipe tuberculation. A full flow drain test will also flush foreign particles, rust, etc., from the sprinkler system which will help to prevent pluggage. Results of the tests shall be recorded on the proper forms and placed on file in S-16 Sprinkler Systems,

# 2. Inspections

- a. Notify ADT that the fire pump will be running and they will be getting flow signals in all of the sprinkler risers.
- b. Notify the following members of supervision that each sprinkler riser will be flowed and the water gongs will ring:

Plant Manager Assistant Plant Manager Personnel Superintendent All Area Supervision Maintenance Supervisor Guard

- c. Open the bypass on the fire pump.
- d. Start the fire pump and close the bypass until the pressure gauge on the pump discharge reads approximately 100 psi.
- e. Open the sprinkler draw off valve wide. The valve is located at each of the sprinkler risers.
- f. Record the flow pressure shown on the sprinkler riser pressure gauge located before the automatic check valve.
- g. Check and record whether or not the water gong is operating during the flow.
- h. Close the sprinkler draw off valve.
- i. Record the <u>static</u> pressure shown on the sprinkler riser pressure gauge located before the automatic check valve.
- j. Check to make sure there is no water flow through the water gong or draw off valve.

ATTACHMENT 9-1m-1

# **RECORDS:**

Record the results of the test on an "S-16 Annual Sprinkler System - Full Flow Drain Test" form including the date, the inspector, and each building riser. Route to the Maintenance Supervisor, Engineering Superintendent, then file in S-16 Sprinkler Systems with a copy sent to all area supervision. Records shall be maintained for not less than three years and not more than five years.



Date:	5/27/81
-	

Superseding Date:

TITLE: AUTOMATIC SPRINKLER SYSTEM - DRY PIPE VALVES

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1. <u>General</u>

All automatic dry pipe sprinkler systems shall be tested every two years to provide assurance of proper operation. Repairs, if necessary, shall be made at that time and reported to Mechanical Supervision. Results of the test shall be recorded and placed on file in S-16 Sprinkler Systems.

# 2. Inspections

- a. Notify ADT (243-6266) and plant personnel that testing is being performed on the sprinkler system according to Safety Procedure No. 44 so they will show sprinkler flows and the fire pump will be off.
- b. Turn fire pump off.
- c. Close the sprinkler control valve and re-open two turns. This will permit rapid closure after dry valve has been tripped.
- d. Locate inspector's test connection, remove plug and check for safe water discharge.
- e. Record static water pressure on riser and air pressure on sprinkler system.
- f. Open inspector's test valve and record:
  - time for a dry pipe valve to trip.
  - air pressure at which dry pipe valve tripped.

#### NOTE 1: A valve fails test when:

- it does not operate immediately following reduction of air pressure to zero.
- the valve clapper reseats itself after the valve trips.
- mechanical failure of parts occurs.

- NOTE 2: Valves are considered slow in operation and need maintenance when:
  - a differential in excess of 6 to 1 water to air pressure is required to trip valve.
  - valve trips but all parts do not function properly.
- g. Close main sprinkler control valve completely.
- h. Drain system through main drain on riser and auxiliary drain for those systems so equipped.
- Close and re-plug inspector's test connection.
- j. Open and examine dry pipe valve, removing scale or mud. Check valve seat and gaskets.
- k. Reset dry pipe valve and replace cover.
- 1. Close riser drain and pressurize system with air.
- m. Fully open main sprinkler control valve slowly.
- n. Test alarm using the alarm test valve.
- o. Reseal all valves with yellow plastic seals.
- p. Secure system by rechecking for constant air pressure, closed drain valve, wide open main control valve and proper position of alarm test valve.

# **RECORDS:**

Record the results of the test along with the date and the inspector. Route the results of the test to the Maintenance Supervisor, Engineering Superintendent and then file in S-16 Sprinkler Systems with a copy to the area. Records shall be maintained for not less than six years and not more than ten years.



pate	:	5/2/	/81	

Superseding Date:\_\_\_\_

TITLE: SPRINKLER CONTROL VALVE (PI) INSPECTION

AND TESTING -

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1. General

All sprinkler control valves (post indicator valves or PI valves) shall be visually inspected monthly to insure the valve is open. and in good physical condition. They shall be tested annually to insure a complete and positive shutoff. Results of the inspection and test shall be recorded and placed on file in S-16 Sprinkler Systems.

# 2. Inspections

# Monthly .

- a. Inspect each valve to insure it is open. Open it if it is closed.
- b. Check to insure the seal is intact. Reseal if necessary.
- c. Check the general physical condition of the valve handle, valve body, to insure it is operable.
- d. Record the results of the inspection along with the date and the inspector on an "S-16 Monthly Sprinkler Control Valve (PI) Inspection" form. Route it to the Maintenance Supervisor and Engineering Superintendent. It should then be filed in S-16 Sprinkler Systems with a copy to all area supervision.

# Annually

- a. Fill out a "Fire Valve is Shut" card for each sprinkler control valve and alert ADT and plant personnel according to Safety Procedure No. 44 "Fire Valve Shut Off".
- b. Shut off the fire pump.
- c. Open the sprinkler draw off valve located at the sprinkler riser. Let water flow for a few moments to flush sediment from the PI valve.
- d. Close the sprinkler draw off valve.
- e. Close the PI valve.
- f. Open the sprinkler draw off valve and reduce the pressure in the riser to approximately 25 to 30 psi. This will be shown on the pressure gauge located before the riser automatic check valve.

ATTACHMENT 9-10-1

- g. Close the sprinkler draw off valve and observe the riser pressure for 15 seconds.
- h. If the pressure rises, open the PI valve slightly and repeat Steps c through g.
- i. If the pressure does not rise, then open the PI valve slowly and completely.

# RECORDS:

Record the results of the test along with the date and the inspector on an "S-16 Annual Sprinkler Control Valve (PI) Test" form. Route to the Maintenance Supervisor and the Engineering Superintendent, then file in S-16 Sprinkler Systems with a copy to all area supervision. Records shall be maintained for not less than three years and not more than five years.

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Date:	December	8,	1981	
•		•		

c :

Superseding Date: None

TITLE: FIRE EXTINGUISHER INSPECTION

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

### 1. General

All fire extinguishers shall be inspected at intervals as noted below. Repairs, if possible, shall be made at the time of inspection and shall be reported to Mechanical Supervision. Results shall be recorded on the corresponding inspection forms, a copy sent to area concerned, and placed on file in S-17 fire fighting equipment. (Annual only)

# 2. Inspections

### a. Monthly

- 1. Extinguisher is in its designated place.
- 2. Access to or visibility of extinguisher not obstructed.
- 3. Extinguisher has not been activated or tampered with.
- 4. No obvious physical damage, corrosion, or other impairment.

# b. Annually

- 1. Weigh cylinder cartridge and replace if it is  $\frac{1}{2}$  ounce or more below weight stamped on cartridge.
- 2. Check freedom of operation of nozzle lever and nozzle obstructions.
- 3. Remove fill cap from dry chemical shell.
- 4. Make certain shell is full and that the dry chemical flows freely. Remove a small portion from the top center of the charge with a small scoop. If no lumps are found, the dry chemical is in satisfactory condition.
- 5. If lumps are present, remove one with fingers and drop from a height of ht to a hard surface. If the lump breaks apart completely, the chemical is in satisfactory condition. If the lump does not break, replace the charge.

6. Examine fill cap threads and gaskets to see that they are in good condition. Clean the seating surfaces and replace cap tightly.

### RECORDS:

The attached "Fire Extinguisher Inspection" form is to be filled out and routed to Maintenance Supervision and to file. Make notations of repairs or adjustments made. Records shall be maintained for not less than two years and not more than four years.

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•	Dat	e:	5/	29	/81

Superseding Date:\_\_

TITLE: SECTIONAL CONTROL VALVE INSPECTION AND TESTING

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1\_ General

All sectional control valves shall be inspected monthly to insure that they are open. The valves shall be tested annually to determine the reliability of valves to provide satisfactory shutoff for fire main repairs and for prompt isolation of accidental main rupture. Results of the inspection and test shall be recorded on the proper forms as listed below and filed in S-19 Fire Mains and Valves.

# 2. <u>Inspections</u>

# Monthly

- a. Remove the cover from the valve.
- b. Check the valve with the valve wrench to insure that it is open.
- c. Check the valve stem, cover and wrench to be sure they are in good physical condition.

# **RECORDS**

Record the results of the inspection on an "S-19 Monthly Visual Sectional Control Valve Inspection" form. Route to the Maintenace Supervisor, Engineering Superintendent, then route to S-19 Fire Mains and Valves with a copy to all area supervision.

### Annua 1

- a. Notify ADT and plant personnel according to Safety Procedure No. 44 - "Fire Valve Shut Off".
- b. Shut off the fire pump, the 8" city water line to the fire main and the 8" valve from the water tower according to Safety Procedure No. 44.
- c. As shown in Figure 1, close sectional control valves % and 8.
- d. Copen hydrant #4 and check to determine no flow exists.
- e. Open sectional valve 8 and check for flow at hydrant #4. Close hydrant #4.
- f. Close sectional valve 9.
- g. Open hydrant #4 and check for no flow.

ATTACHMENT G-10-1

- h. Open sectional valve 9 and check for flow at hydrant #4. Close hydrant #4.
- i. Close sectional valve'7
- j. Open hydrant #3 and check for no flow,
- \*\*\*\* Open sectional valve-7 and check for flow at hydrant #3. Close hydrant #3.
  - 1. Close sectional valves 10 and 12.
  - m. Open hydrant #2 and check for no flow.
  - n. Open sectional valve 10 and check for flow at hydrant #2. Close hydrant #2.
  - o. Close sectional valve II.
  - p. Open hydrant #2 and check for no flow.
  - q. Open sectional valve 11 and check for flow at hydrant #2. Close hydrant #2.
  - r. Close sectional valve 13.
  - s. Open hydrant #2B and check for no flow.
  - t. Open sectional valve 13 and check for flow at hydrant #2B. Close hydrant #2B.
  - u. Attach a 0-100 psi pressure gauge to hydrant #2A.
  - v. Open hydrant #2A and record the pressure shown on the gauge.
  - w. Open sectional valve 12 and observe the pressure gauge. If sectional valve 12 has opened, then the pressure will be higher since the water will have less distance to travel. Record that pressure.
  - x. Close hydrant 2A and remove the gauge.
  - y. Attach the pressure gauge to hydrant #4.
  - z. Open hydrant #4 and record the pressure shown on the gauge.
  - aa. Open sectional valve 7 and observe the pressure gauge. If sectional valve 7 has been opened, then the pressure will be greater. Record the pressure.

BO. OPEN TOWER AND OPEN CITY WATER VALUE

# RECORDS:

Record the results of the test on an "S-19 Annual Sectional Control Valve Test" form. Route the results to the Maintenance Supervisor, Engineering Superintendent and then file in S-19 Fire Mains and Valves, with a copy to area-supervisor. Records are maintained for not less than three years and not more than five years.

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	pate: 5	729/81	
Superseding	Date:		

TITLE: FIRE HYDRANT INSPECTION

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1. General

All fire hydrants shall be inspected quarterly to assure that hydrants are operable and drainage is sufficient to prevent freezing. Repairs, if possible, shall be made at the time of inspection and reported to Mechanical Supervision. Results shall also be recorded on the corresponding inspection forms and placed on file in S-19 Fire Mains and Valves.

# 2. Inspections

# Quarterly

- a. Each hydrant shall be checked to insure good physical condition. The hydrant, handle, drain cocks and valves
- should be checked for cracks, broken parts or badly rusted parts.
- b. Each hose gate valve shall be opened and closed to insure good operation of each valve. The pre-connected valve shall then remain open and the other valve closed.
- c. Each drain cock shall be checked to insure they are open.

# Spring and Fall

Each spring and fall, each hydrant shall be opened and water flowed in the following manner:

- a. Remove pre-connected hose.
- b. Close both drain cocks.
- c. Open both hydrant gate valves.
- d. Open the hydrant valve and run water through both outlets until the stream runs clear (care should be taken to prevent displacement of dirt or gravel; a piece of sheet metal or plywood will protect loose ground).
- e. Close the hydrant valve slowly.
- f. Check hydrant drainage by holding a hand over the hose gate valve opening and checking for vacuum.
- g. Reattach the pre-connected hose.
- h. Close the other hose gate valve.
- i. Open the drain cocks.

ATTACHMENT G-12-1

# RECORDS:

Record the results of the inspection including the date and inspector on the corresponding form entitled "Fire Hydrant Inspection", route to the Maintenance Supervisor, Engineering Superintendent and file in S-19 Fire Mains and Valves. A copy of the inspection shall be routed to each area supervisor. Records shall be maintained for not less than one year and not more than two years.



•	Date: 5/29/81	_
Superseding	Date:	

TITLE: HYDROSTATIC TEST OF UNDERGROUND FIRE MAIN

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# General

The underground fire main, including sprinkler systems, shall be hydrostatically tested annually to 50 psi above the operating pressure or 150 psi, whichever is greater. The purpose is to determine the underground pipe ability to withstand pressures that may result from either water hammer (surge) or operation of the fire pump. Results of the test shall be recorded on the corresponding form and placed on file in S-19 Fire Mains and Valves.

# 2. <u>Inspections</u>

- a. Plant personnel and ADT shall be notified in accordance with Safety Procedure No. 44, Fire Valve Shut Off.
- b. Shut off the 8" valve from the water tower up in the west elevator penthouse. Open the 2" drain valve on the bottom of the water tower line in 1B Basement and drain the line. This will allow any leak through the check valve during the test to be observed.
- c. Close both valves from the 8" city water supply line to the fire main. These are located in a vault by #1 hose house.
- d. Shut off the diesel fire pump.
- e. If possible, position a man at various points around the fire main so that all portions of the line are visible.
- f. Using the jockey pump, slowly increase the pressure in the fire main by slowly raising the upper limit on the pump's mercoid pressure switch located above the pump.
- f. Raise the pressure until it reaches 50 psi above the operating pressure or 150 psi, whichever is greater. The operating pressure of the fire main is the pressure indicated on the fire pump discharge gauge under no flow (except the relief valve) conditions when the fire pump is at full operating speed.
- g. Throttle the discharge valve at the jockey pump to limit flow.
- h. Hold hydrostatic pressure for 30 minutes, observing gauges at all times.

ATTACHMENT G-15-1

- i. Any sudden drop in pressure downstream of the throttled valve indicates a large leak or rupture. The pump should be shut down, the leak located and isolated by means of sectional control valves and repaired. Another hydrostatic test should follow any repairs.
- j. At the end of the test, return the jockey pump's mercoid pressure switch to its original setting.
- k. Reduce the pressure in each of the sprinkler risers by opening the draw off valve until the riser pressure falls to the normal pressure.
- 1. Open the water tower valve.
- m. Open city water valves.
- n. Turn power on to the diesel fire pump.

# **RECORDS:**

Results of the test shall be recorded on the form "S-19 Annual Hydrostatic Test of Underground Fire Main", including the date, test pressure, duration, how it was obtained and results. The test results should be routed to the Maintenance Supervisor, Engineering Superintendent and then placed on file in S-19 Fire Mains and Valves with a copy sent to the area supervisors. Records shall be maintained for not less than three years and not more than five years.

ON JOB CO

DATE: May 29, 1981

<u>S-26</u>

SUPERSEDING: December 22, 1971

# MECHANICAL INSTRUCTIONS

TITLE: FIRE DOOR INSPECTION

### PROCEDURE: -

# 1. General

: ::

All plant fire doors shall be inspected on a monthly basis. Adjustments and repairs shall be made at time of inspection.

## 2. Inspection

Doors shall be inspected for the following items:

- a) Access not obstructed by skids, drums, etc.
- b) Condition of doors, tracks, rollers, stops, bolts, wire rope and counterweights.
- c) Test for proper operation.

#### RECORDS

The attached list "Fire Doors" shall be used as a check list to insure that all doors are checked. Work done shall be noted on attached form S-26, and repairs made at time of inspection. Route copy through Maintenance Supervisor, Engineering Superintendent, and to File. Records shall be maintained for not less than 1 year and not more than 2 years.

Can Roll

S-29

Date	5/22/81	_ <del>:</del>
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Superseding Date: 1/14/76

TITLE: DRY CHEMICAL EXTINGUISHING SYSTEM (Ref. F6A)

# MECHANICAL INSTRUCTIONS

# PROCEDURE:

# 1. General

Dry chemical extinguishing systems shall be inspected and tested at intervals as noted below. Maintenance of the systems and recharging of cylinders will be done as shown in the Ansul Maintenance Manual. Repairs shall be made at time of inspection. Records shall be kept as noted below in "Records".

# 2. Inspections

# a. Quarterly - Visual

- 1. Note general appearance of Ansul Automan, Dry Chemical Shell and associated equipment for damage or corrosion.
- 2. Check nameplates for readability.
- 3. Check lead and wire on ring pin in red strike button. Replace if missing or broken.
- Check visual release indicator position should be in cocked position.
- 5. Check piping, fittings, blow-off caps, nozzles and detectors for mechanical damage or corrosion.
- 6. Record date of inspection.

# b. <u>Semi-Annually</u>

- 1. Weigh cylinder cartridge and replace if it is 1/2 ounce or more below weight stamped on cartridge.
- 2. Install lock bar in position to prevent discharge, remove wire seal and unscrew cartridge which has a right hand thread.
- 3. Inspection of paper seal in line 3/4" between union.
- 4. Remove lock bar and test trip mechanism. Replace lock bar.
- 5. After weighing the cartridge, screw it back into place, replace seal wire and remove lock bar.

# c. Annually

# 1. Examine Powder

- a. Remove fill cap from dry chemical shell.
- b. Make certain shell is full and that the dry chemical flows freely. Remove a small portion from the top center of the charge with a small scoop. If no lumps are found, the dry chemical is in satisfactory condition.
- c. If lumps are present, remove one with fingers and drop from a height of 4" to a hard surface. If the lump breaks apart completely, the chemical is in satisfactory condition. If the lump does not break, replace the charge.
- d. Examine fill cap threads and gaskets to see that they are in good condition. Clean the seating surfaces and replace cap tightly.

# **RECORDS:**

The attached "Dry Chemical Inspection" form is to be filled out and routed to Maintenance Supervisor, Engineering Superintendent and to file. Make notations of any repairs or adjustments made at time of the inspection. Records shall be maintained for not less than two years and not more than four years.

Procedure No. /	Date: July 15, 19/5
Subject: Identification of the Health, Fire and Reactivity Hazards	Superseding Date: March 3, 1975

J. J. Teachey

The purpose of this procedure is to outline the ways for easy recognition of the fire hazards of materials stored in tanks and in buildings as they relate to fire prevention, exposure and control. This procedure is to be reviewed annually by the Hazardous Materials Committee.

### General:

of Materials.

This system identifies the hazards of a material when exposed to fire in terms of three principal categories; namely, health, flammability, and reactivity (stability). The system indicates the order of severity numerically by five divisions ranging from four, indicating a severe hazard, to zero, indicating no special hazard. Each of the three hazards has its own specific color; blue for health hazard, red for flammability, and yellow for reactivity (stability).

The health hazards were developed under fire conditions and show the possible injury that could result from exposure to the vapors of the listed raw materials. The flammability hazards show the susceptibility of materials to burning and the conditions necessary for fire. The reactivity hazards designate the susceptibility of a material to release energy.

# Signal Categories:

The table on Page 3 explains the three principal hazards and the degree of hazard in each category as well as the corresponding signals.

# <u>Signal Letter Size and Proper Signal Arrangement:</u>

Signals should be three (3) inches in height for legibility at 100 ft., adhesive backed for ease of application and revision, and placed on the most visible side of the tank (both ends) two feet from the top.

The proper arrangement of the identifying hazard signals is shown below.

# Responsibilities:

The Hazardous Materials Committee, when informed by the area of a new material being placed in a storage tank, will issue to all areas a supplement sheet showing the proper tank designation for the new materials.

The area will carry out this practice after issuance. Each area will make sure all tanks are properly marked and tank lists are kept current. Any changes in materials stored in specific tanks are to be reported to the Hazardous Materials Committee and the Fire Chief. Storage of a material not previously stored in tanks should be reported to the Hazardous Materials Committee and the Fire Chief. Each area will issue work orders to the Plant Engineering Department to have signals placed or changed.

ATTACHMENT G-4c.

Date: July 15, 1975

Superseding Date: March 3, 1975

The Plant Engineering Department will purchase the necessary signals, place the signals on the tanks and replace or change signals when worn or when a change in a material stored is made. When work such as repairs and painting is performed on tanks, the P.E.D. will replace any decals removed for the aforementioned purposes.

The Area Supervisor will report to the Hazardous Materials Committee any new materials stored in tanks. The Area Supervisor must also provide the Fire Chief with a current list of tanks with proper hazard designation.

No material is to be stored in a tank until the proper identification has been installed on the tank.

The same procedures will be followed in designating buildings where hazardous materials, specially reactive materials or flammable materials are stored or used. Stickers will reflect the highest rating applicable to materials in the building and will be affixed over major doorways entering the building or storage room.

NOTE:

Identification descriptions and hazard ratings on the following pages are based on recommendations found in the "Fire Protection Guide on Hazardous Materials (3rd Edition)" published by the National Fire Protection Association.

and --

Engineering Standard F4A

Procedure No. 7

Superseding Date: March 3, 1975

Identification of Health Hazard Color Code: BLUE	Identification of Flammability Color Code: RED	Identification of Reactivity (Stability) Color Code: YELLOW
Type of Possible Injury	Susceptibility of Materials to Burning	Susceptibility to Release of Energy
SIGNAL	SIGNAL	SIGNAL
4 - Materials which on very short exposure could cause death or major residual injury even though prompt medical treat- ment was given.	4 - Materials which will rapidly or completely vaporize at atmospheric pressure and normal ambient temperature or which are readily dispersed in air and which will burn.	4 - Materials which are readily capable of detonation or of explosive decomposition of reaction at normal temperatures and pressures.
3 - Materials which on very short exposure could cause serious temporary or residual injury even though prompt medical treatment was given.	3 - Liquids and solids that can be ignited under almost all ambient temperature conditions.	3 - Materials which are capable of detonation but require a strong initiating source and which must be heated under confinement before initiation.
2 - Materials which on intense or continuous exposure could cause temporary incapacitation or possible residual injury unless prompt medical treatment is given.	2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.	2 - Materials which readily undergo violent chemical change.
1 - Materials which on exposure would cause irritation but only minor residual injury even if no treatment is given.	1 - Materials that must be preheated before ignition can occur.	1 - Materials which are normally stable, but which can become unstable in combination with other common materials or at elevated temperatures and pressures.
0 - Materials which on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.	O - Materials that will not burn.	O - Materials which are normally stable.

7

Procedure No. 7
(E. BUILDING)

Date: August 9, 1982

Superseding Date: 3-28-79

# List of Toledo Storage Tanks with Appropriate Identification Signals:

TANK NO.	CODE	MATERIAL	"S" CODE	HEALTH (Blue)	FLAMMA- BILITY (Red)	REACTIVITY (Yellow)
1E5 1E6 1E7 1E8 1E9 1E10 1E15 1E16 1E17 1E18 1E19 1E20 1E21 1E22 1E23 1E24 1E25 1E25 1E26 1E27 1E28 1E29 1E30	RCH-61323 RC-66073 RC-6072 RC-64400 RC-11136 RC-63757 H-514 H-344 H-158 H-59 H-188 H-2 RC-65889 G-264 RL-3802 RC-60384 RC-5107 RC-11104 RC-11104 RC-11104 RC-66067 RC-3710 G-26	Acrylic Acrylic Acrylic Alkyd Acrylic Ethylene Glycol Coconut Oil Safflower Oil Soya Bean Oil Dibasic Esters Glycerin ALKYD MF Resin Alkyd Alkyd Oligomers Acrylic Acrylic Acrylic Alkyd Melamine Form. Resin Acrylic	S-2 S-2 S-2 S-2 S-2 S-2 S-2 S-2	222222""222222"" 2222222"" 2222	3333333""3333333"" 333	0000000 " " 00000000 " " 00
1E32	RC-5106	Oligomer	S-2	2	3	0
(Field Tank	<u>s</u> ) <sub>.</sub>					
W-1 W-2 W-3 W-4 W-5	RL-3340 H-710 MT RCE-99220 G-243	Coconut Alkyd Resin. Styrene Monomer Paint Liquid Resin Phthalic Anhydride	\$-2 \$-5	2 2	3	0 2(P)
W-6 W-8 W-9	MT MT MT	(Molten)	S-4	3	1	0
	Vault s Material Room oor "Dulux" Mill	base &	S-3-5 S-1-6	2 4 0	4 3 4	4 2 0

Resin storage

A

Date: 8-9-82

Superseding Date: 3-28-79

# List of Toledo Storage Tanks with Appropriate Identification Signals:

TANK NO.	CODE	MATERIAL	"S" CODE	HEALTH (Blue)	FLAMMA- BILITY (Red)	REACTIVITY (Yellow)
T-21 T-22	H-428 H-79	Methyl Methacrylate Ethylene Glycol	S-3 S-2	2 1	3 2	2 0
T-23 T-24 T-25	MT H-6 MT	Butyl Acetate	S <b>-</b> 2	1	3	1
T-26	G-723	Butyl Acrylate MEHQ	S <b>-</b> 6	2	2	2(P)
T-27	H-224	Ethylene Glycol- Mono-Butyl Ether	S <b>-</b> 2	3	2	0 -
T-28 T-29	H-69 H-44	Isopropyl Alcohol M.I.B.K.	S-0 S-2	0	3 2	0 1
T-30	MT			_		
T-31 · T-32	H-425 MT	Naphtha	S <b>-</b> 0	1.	3	<b>0</b>
T-33	MT	Mathyl Amyl Katana	S <b>-</b> 2	1	2	0
T-34 T-35	H-90 H-416	Methyl Amyl Ketone Naphtha	5-2 S-2	i	3	0
T-36	H-721	Ethyl Acrylate	S-6	2	3	2(P)
T-37 T-38	H-49 H-583	Toluene Xylol	S-2 S-0	2 1	3	0 0
T-39	H-457	Mineral Spirits	S-0	ļ	2 3 3 3 3 3 2 3 2 3 2 3	0
T-40 T-41	Clean Wash So H-596	Hydrocarbon	S-2 S-2	1	3 2	0 0
T-42	H-12	N-Butyl Alcohol	S-2	i	3	0
T-43	H-601	Hydrocarbon	S <b>-</b> 0	2	2	0
Resin Area "Teflon" A	rea			4 4	0	2
		(Old Cotton Shed)	S-1-6		3	2
"C" Buildir	na					
C-3	-3-G-72	TMPd	S <b>-</b> 2	. 1	1	0

### SECTION I. CLOSURE, POST-CLOSURE PLAN AND FINANCIAL REQUIREMENTS

### A. Purpose

This plan outlines the steps required to close a RCRA Hazardous Waste Storage Facility. Included are plans for off-site disposal of all stored waste and decontamination of all surfaces and tanks.

### B. Applicable Regulations

This plan complies with the provisions of OAC 3745-55,

Applicability - Closure and post-closure, for RCRA Hazardous Waste

Storage Facilities.

# C. Organization

This plan covers both general requirements and specific tasks for various types of storage as is appropriate for this site in these sections.

- I-1c Closure Performance Standard
- I-1c-2 Administrative Requirements
- I-1d-1 Schedule of Closure
- I-1d-2 Time of Closure
- I-le Disposal/Decontamination
- I-1f Closure of containers
- I-1g Closure of Tanks
- I-1h Closure of Waste Piles
- I-1i Closure Plan Amendments
- I-1j Certification
- I-4 Cost Estimates

# I-4a Specific Closure Activity

- \* Drum Pad
- \* Storage Tanks

### I-5 Financial Assurance

Section I-4a is prepared in a modular manner for sites with more than one storage area or tank which allows a partial closure of the facility without rewriting the plan.

### I-1. Closure Plan

The attached closure plan has been updated to reflect the current hazardous waste management system covered by this Part B application.

The closure cost estimate has been re-calculated to cover the [reduced number of] FOUR (4) tanks and the increased tank capacity of tanks handling hazardous wastes THAT ARE PRESENTLY IN USE, AND THE FOURTEEN (14) OLD TANKS THAT ARE IN THE PROCESS OF CLOSURE. A SEPARATE AND APPROVED PARTIAL CLOSURE PLAN IS IN EXISTENCE.

### I-1a. Partial Closure and/or Final Closure

It is possible that a tank may be taken out of service, and replaced with a new one sometime during the life of the plant. It is also possible that the container storage location may be reduced in size or closed completely for one reason or another. In that case, a closure notice for the old tank or container storage area and a request for permit modification would be submitted to the Ohio EPA.

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The outlined closure plan as submitted would be followed for any partial closure activity.

Since disposal contracts are currently in effect, no delays in shipping wastes off site are anticipated, and since a partial closure means that the site was still operational and properly staffed, the bulk of any partial closure work would be performed by plant personnel.

Closure cost estimates on the other hand are based on outside contractors performing all tasks.

As long as the plant continues to make paint, there will be waste generated and stored prior to on-site recovery or off-site disposal. The plant has a time table for final closure based on a yet-to-be-determined closure date, "C".

If this facility is ever closed permanently, it will probably be in the year 2010.

#### I-1b. Maximum Waste Inventory

The storage capacity on page 1, form 3 of the revised Part A application submitted on August 10, 1989 was 93,500 gallons in container storage (SO1) and 40,600 gallons in tanks (SO2). The closure cost estimates assume the worst case - the maximum inventory would be on hand at closure. This revised Part A (with a total of 4 tanks now has this maximum inventory:

\* Containers: 93,500 gallons

\* Tanks (4): 40,600 gallons

Total HW: 101,500 GALLONS

The revised closure costs reflect disposal of this volume of HW.

Disposal procedures for equipment, structures, and soils are outlined in the procedures Section I-1e. Closure procedures for containers and tanks are outlined in the procedures Section I-4a(A) and I-4a(B).

# <u>I-1c-1.</u> <u>Closure Performance Standard</u> OAC 3745-55-11

1. The environmental standard which governs all hazardous waste management (HWM) facility closings is given in OAC 3745-55-11:

The owner or operator must close the facility in a manner that:

- (A) Minimizes the need for further maintenance; and
- (B) Controls, minimizes or eliminates, to the extent necessary to prevent threats to human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
- (C) Complies with the closure requirements of rules 3745-55-10 to 3745-55-20 of the Administrative Code, including, but not limited to, the requirements of rules 3745-55-78, 3745-55-97, 3745-56-28, 3745-56-58, 3745-56-80, 3745-57-10, 3745-57-51, and 3745-57-91 to 3745-57-93 of the Administrative Code.

As indicated in the plan, the storage pad will be cleared by shipping all hazardous waste to a RCRA approved disposal site. The contents of the dirty wash solvent tanks will be burned for heat recovery or shipped to a RCRA approved incinerator. A clean-out of

any sludges in the tanks will be all that is needed to conclude the decontamination of the tanks. No post-closure maintenance is anticipated or required for these storage facilities.

### I-1c-2 Administrative Requirements

Certain record keeping and other administrative duties relative to closure are specified for the owner/operator of a HWM facility.

- (A) This plan must be completed by May 19, 1981, but may be revised at any time during the active life of the facility.
- (B) It must be amended within 60 days of changes in:
  - Operating plans or facility design which effect the closure plan;
  - 2. Change in the expected year of closure.
- (C) The written plan and all amendments must be available at the facility until closed and certified.
- (D) The maximum inventory of waste storage must be documented by type of storage.
- (E) An estimate of the closure required.
- (F) The plan must be submitted to the Administrator of Ohio EPA at least 180 days before expected closure.
- (G) The cost of closure must be updated annually for the annual report of the facility to the Ohio EPA.

### <u>I-1d-1</u> <u>Schedule of Closure - Time Allowed</u> OAC 3745-55-13

The closure of the facility outlined in this permit revision application will begin approximately six months after approval of

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the closure plan and permit revision by the EPA. Closure of the four tanks to be removed from hazardous waste service will be completed over a period of approximately six months. Since disposal contracts are currently in effect, no delays in shipping wastes off site are anticipated.

- (A) The schedule of closure is a list of steps some of which are required by regulations (see references in each step) which include both administrative and physical closing actions.
- (B) The time frame for these steps is relative to the date when closure commences and are referenced as "C" minus X months and "C" plus Y months.
- (C) The steps of closure are:

Time	Step

- 1. C minus 10 mos. Determine when closure is to occur.
- 2. C minus 6-10 mos. Make any amendments needed; prepare copy for Ohio EPA.
- 3. C minus 6 mos. Submit copy to Ohio EPA for approval.
- 4. C minus 3 mos. EPA must have approved or rejected.
- 5. C minus 1-3 mos. Conclude contracts, train operators and/or mechanics as needed.
- 6. C. Start closure. Remove wastes and wash with appropriate solvents. Rinse with water.
- 7. C plus 1 mo. Inspect tanks for contamination.

  Sample and submit for test if clean.

  Or, start decontamination if needed.

  Sample and submit for test.
- 8. C plus 3 mos. Determine if closure can be completed in 6 mos.; if yes, no action; if no, apply for an extension.

- 9. C plus 6 mos. Complete closure; obtain certification.
- (D) When amended for a known closure, the "C" plus and minus dates will be specified in the plan.

### I-1d-2 Time of Closure

- (A) This HW storage facility is on an active production facility for which there has been no forecasted closure. It is expected to receive all hazardous waste generated on the site prior to treatment and/or shipment off-site for disposal.
- (B) Closure of the production facility would encompass a phase-out over a period of at least a year or more. This will be amended with a specific closure date estimate within 60 days of a firm commitment to cease production and/or stop waste generation.
- (C) Changes in production volume or process may dictate a partial closing at the site. When these changes are known, an amendment will be made with an estimated closure date.

### <u>I-le.</u> <u>Disposal or Decontamination of Equipment;</u> OAC 3745-55-14

- Disposal and decontamination of equipment, structures, and soil is covered in Section I-le and this Section.
- 2. Management of wash and rinse water, management of other types of wastes generated during decontamination and estimate of volume of waste material generated is also covered in THIS Section [I-C,VI; and Section I-C,VII].

- 3. This section of the plan outlines specifically the disposal site where each hazardous waste will go in what type container. An amendment is necessary whenever the site designated is changed for any reason.
- 4. The waste streams and their disposal sites are:
  - a. Still Bottoms (D001, D005, D007, D008, D018, D035, F003, F005), drums all drums to be pumped into a storage tank for blending, and shipped to LaFarge Systech Corp., Paulding, Ohio, under an existing contract. Our Waste Code No. WOT-12.
  - b. Waste Paint Liquid (D001, D005, D007, D008, D018, D035, F003, F005), drums ship to Robert Ross & Sons, Inc., Grafton, Ohio, under an existing contract. Our Waste Code WOT-13.
  - c. Clean out dirty wash solvent tanks (D001, F003, F005), pump drums to a storage tank for blending, ship to same as item "a", under an existing contract. Our Waste Code WOT-12.
  - d. Waste Dowtherm Contaminated with Water (non-hazardous), pump to tank wagon - ship to DuPont, Chambers Works, Deepwater, N.J., for treatment under an existing contract. Our Waste Code WOT-5a.
  - e. Unreacted/Partially Reacted Monomers (D001, D002, D003, F003), drums -ship to same as item b. Our Waste Code WOT-8.
  - f. Waste Resin (D001, D018, D035, F003, F005), drums and tank wagons - ship to same as item a and item b. Our Waste Code WOT-9.

- paint and Chemical Contaminated Solid Waste (D001,D005, D008, D026, D035, F003, F005), drums ship to ENSCO, Inc, Durango, Arkansas; or to same as item b. Our Waste Code WOT-17.
- h. Partially Decomposed Initiator in Water D003), drums ship to same as item b. Our Waste Code WOT-20.
- Resin Reaction Kill Solution (p-Benzoquinone) (D001,
   D002, F003), drums ship to same as item b. Our Waste
   Code WOT-21.
- 5. Disposal of equipment, structures, and soils.
  - a. Any closure of the drum pad would only require removing the drums from this area for combining in a tank wagon or shipping the drums as is to a disposal facility. Pad cleaning with solvents, scrapers, and mops if needed would require the solvents and mops to be disposed under one of our existing waste streams. Scrapers and/or shovels would be washed in solvents and soapy water and returned to general use.
  - b. Closure of solvent tanks would require draining out all waste, rinsing the tank with an appropriate solvent (approximately 50 gallons), and then rinsing with a soap and hot water solution (approximately 50 gallons). If any dried residue of HW is still present, the tank would be water jet cleaned to bare metal and again rinsed with soap and hot water solution (approximately 50 gallons). The tank would then be certified as clean by an outside professional engineer and either placed into general

service or scrapped for it's metal value.

The water and soap rinse would be tested for contamination and either discharged as wastewater or shipped out for treatment to a facility, same as item "d" in I-1e(4).

- 6. Any equipment used, except for throw away items like mops and gloves, would be decontaminated and returned to general use. Reusable equipment would be washed with an appropriate solvent, then with soap and water, and finally with clean water before placing back into storage or use.
- 7. There is no need to consider disposal of any structure since the HW facilities are only a small part of the general operating area and structures would continue to be used for general manufacturing needs.
- 8. The existing system as outlined in this permit application shows very clearly that there is no danger of soil contamination. Any soil contamination if it occurs would be corrected after testing, by removing the identified contaminated soils and disposing of them as hazardous waste.

# <u>I-1f.</u> <u>Closure of Container Storage Pad;</u> <u>Decontamination;</u> OAC 3745-55-78

This section of the closure plan outlines who wall do the necessary decontamination of the storage facilities at closure.

shoveled if needed. Any visible residue on the concrete

would be solvent cleaned followed by a soap and water solution mopping. Most likely, the work would be done by plant personnel, although the closure costs are calculated based on an outside contractor doing all the decontamination.

- Solvent tanks would be decontaminated as outlined in Section I-1e(5)(b).
- c. Equipment would be decontaminated as outlined in Section I-le(6).
- d. Decontamination of structures, if any, is covered in Section I-le(7).
- e. There is no need or are there any plans for any soil decontamination. Any soil contamination if it does occur will be handled as outlined in Section i-1e(8).

### I-1g. Closure of Tanks; OAC 3745-55-97(A)

Closure of tanks is covered in Section I-1e(5)(b) and I-4a(B). The procedures to be used for sections I-1f, I-1g, and I-1h and off-site disposal locations are given in the closure plan.

### I-1h. Closure of Waste Piles

Not applicable to this site.

#### I-1i. Closure Plan Amendment

There are no changes anticipated at this time. Annual cost estimate escalations will be done in March of each year.

If any future process changes are desired, a revised closure plan

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will be prepared and submitted to the Administrator of Ohio EPA.

### I-1j Certification; OAC 3745-55-15

Within sixty (60) days of completion of closure of our storage areas, and within sixty (60) days of the completion of final closure, we will submit to the director, by registered mail, a certification that the hazardous waste management units, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer.

#### I-2. Post-Closure

Not required for this storage (only) facility.

I-3. Notice in Deed and Notice to Land Authority
Not required for this storage (only) facility.

### <u>I-4. Cost of Closure Estimates</u>; 3745-55-42

The attached cost estimation sheet(s) cover(s) all the steps in closure of this site and proper disposal of all the hazardous waste material on hand at an off-site RCRA location.

Estimates are to allow for the maximum inventory as listed on the attached upgraded or amended calculations sheet(s). Attachment I-4.

### I-4a. Specific Closure Activity.

The specific steps necessary to close this facility are:

- A. Container Storage Pad Closure.
  - 1. Inspect all drums for readiness to ship:
    - a. DOT markings.
    - b. Leaks.
  - 2. Correct any deficiencies found in step #1.
  - 3. Prepare manifest(s) and apply RCRA warning labels.
  - 4. Ship all drums to a permitted Hazardous Waste Management (HWM) facility as covered under existing contracts.
  - 5. Inspect storage pad for residue, drips, leaked material.
  - 6. Clean up material found in step #5.
  - 7. Remove any markings referring to hazardous waste storage.
  - 8. Have a Professional Engineer inspect and certify.
  - 9. File certification of closure.
- B. Storage Tank and Containment System Closure.
  - Remove all hazardous waste to drums or tank wagon by normal pumping plus gravity draining.
  - 2. Flush as may be required to remove residue.
  - Inspect tank, containment system, lines, pumps, etc., to insure cleanliness.
  - 4. If sludges, dried residue, etc., are present, prepare tank for entry, dismantle lines, etc.; scrape and clean as necessary. Scrape and clean containment system as necessary.
  - 5. Ship all drainings, flushings and residues to a

permitted Hazardous Waste Management (HWM) facility as covered under existing contracts.

- 6. Remove all HW markings from the tank and lines.
- 7. Have a Professional Engineer inspect and certify.
- 8. File certification of closure.

### C. Summary

The facility closure plan will adhere to the performance standards specified in OAC 3745-55-11.

All hazardous waste in tanks will be drained/pumped into drums and/or tank wagons. The tanks will be rinsed with common solvents and again drained/pumped into drums and/or tank wagons. The tanks will then be dried until no residual wet material is left. All drums and/or tank wagons of hazardous waste will be disposed of utilizing existing contracts. Corrosive waste if it exists on the plant will be treated to lower the pH and shipped to a water treatment facility.

# I-5. Financial Assurance Mechanism for Closure; OAC 3745-50-44(A)(15), 3745-55-43

Financial assurance can be shown by a "self-insurance" test.

Attached is a copy of the required notice to the Administrator of

Ohio EPA which documents Du Pont's satisfaction of this test.

Attachment I-5.

#### I-6. Post-Closure Cost Estimate

Not required for this storage (only) facility.

### I-7. Financial Assurance Mechanism for Post-Closure

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Not required for this storage (only) facility.

I-8. Liability Requirements; OAC 3745-55-47

Provisions for the satisfaction of the \$1MM/\$2MM sudden occurrence liability through a "self-insurance" test HAD BEEN SUBMITTED PREVIOUSLY. [The combined notice showing satisfaction was attached at Section I-5 above]. The non-sudden occurrence liability requirement does not apply to this storage (only) facility.

I-9. Proof of Coverage by State Financial Mechanism
NOT REQUIRED FOR THIS SELF-INSURED FACILITY.

[The most recent revision of Ohio EPA Hazardous Waste Rules (proposed in April, 1982) do not allow the "self-insurance alternative to satisfy the financial requirements. OEPA did not have an opportunity to adopt the federal April 7 and 16, 1982 proposal essentially modifies OEPA HW rules to equal federal EPA regulations, we presume future federal changes will be mirrored in OEPA rules. Therefore, we have not executed any other instrument of financial requirement satisfaction, but rather rely on meeting federal regulations as being sufficient.]

### K. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

26.M

Eric G. Melin

Plant Manager--Toledo AP

Date: 6/28/9/